

Northwestern Elevated Railroad Co. #S-104

Builders: The Baldwin Locomotive Works, Philadelphia, Pennsylvania
Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pennsylvania

Date: August 1920

Builder #: 53555

Type: Modified Class B 55 Ton Electric Locomotive

Interior Modifications: Controls Single-Ended – One Motorman's Brake Valve
Removed

Exterior Modifications: Pantagraph Removed and Replaced with an Offset
Trolley Pole

Condition: Complete Locomotive

Out-of-Service: 1993

Provenance: Northwestern Elevated Railroad Co.; Chicago Rapid Transit Co.;
Toledo Edison, Acme Plant

Purchased: 14 November 1996

Price: \$10,387

Removal: From Toledo Edison: April 1997

First Removed to Haviland-Callan, Michigan City, Indiana; then to 515 Sheridan

Status: On Hand

Intended Use: Restore as Northwestern Elevated Railroad Co. #S-104

Justification: Northwestern Elevated Railroad #S-104 represents an opportunity
to interpret and explore an environmental conundrum related to the Insull Group's
transportation and consumption of coal to create electricity as well as the
consumption of coal in Chicagoland for home heating.

The Northwestern Elevated Railroad electrified the freight services of the Chicago,
Milwaukee & St. Paul (later Milwaukee Road) on the Llewellyn Park branch (later
Wilmette branch) in 1920 as part of a contract to grade-separate the branch from

Lawrence Avenue in Chicago through Evanston to the Wilmette city limit at Isabella Street. Locomotive S-104 was one of two identical locomotives purchased specifically for the freight service when it was electrified on 1 November 1920.

The electrification of steam railroad terminal services in Chicago was favored for smoke abatement. The electrification of the Illinois Central suburban services on Chicago's south side was a long-sought solution to pollution issues there. The extension of South Shore Line services into Chicago's central business district was a direct benefit of the south side electrification.

But there is irony in that the north side electrification of the Milwaukee Road had the unintended consequence of encouraging the use of coal for home heating in the City by making coal more accessible and less expensive, an effect that lasted for many years. Many of the Milwaukee Road's customers on the Wilmette branch were coal yards serving the needs of local home heating customers. The last coal yard on the Wilmette branch was Lill Coal & Oil Company. Coal train service on the 'L' ended on 30 April 1973, but only after railroad labor costs rose to the point that delivered coal was too expensive for home heating, thus ending the practice.

Most railroad electrifications during the 20th Century relied on coal as the generation of electricity for railroad use was largely reliant on coal-fired generating stations. Ironically, the Milwaukee Road did far better in the Pacific Northwest: in Montana, Idaho, and Washington states, the Milwaukee Road had 645 miles of electrified railroad powered entirely by "White Coal" – the power of falling water.

Conclusion

Northwestern Elevated Railroad #S-104 is an excellent tool to interpret and explore the environmental benefits and pitfalls of electric freight railroading and electric public transit.



*Locomotive
#S-104 at the
Milwaukee Road
Interchange, Buena
Avenue, June 1948.
Locomotive S-105 was
its identical twin.*



Northwestern Elevated Railroad operated the 'L' lines on the North Side of Chicago. By 1911, all four Chicago 'L' companies were in need of credit. To alleviate the credit crunch, an attempt was made to merge the four 'L's with Chicago's street railways. Insull agreed to underwrite a \$6 million loan to cover the integration of the 'L' facilities if the merger failed. When the merger did fail in 1914, the voluntary association of the 'L' companies known as the Chicago Elevated Railways Collateral Trust became the property of the Insull Group's Commonwealth Edison as holder of the \$6 million note. The 'L's merged as the Chicago Rapid Transit Company (CRT) in 1924 under Commonwealth Edison control.



Freight trains on the 'L' nearly always operated at night. During World War II, CRT S-105 and S-104 operated on the Chicago, North Shore and Milwaukee (CNS&M) in daylight hauling coal destined for the Insull Group generating station at Waukegan. As railroads were short of freight power during the war, it made no sense to leave two locomotives idle during the day. S-105 and S-104 alternated between CRT & CNS&M until V-J day.



Nearly always at night – S-104 at Lawrence Avenue on the North Side 'L' hauling coal destined to be burned in basement furnaces along Chicago's North Shore.



The end of a career in coal: the former S-104 as Toledo Edison #4 in the rotary coal dumper at the Acme Plant, 1996.