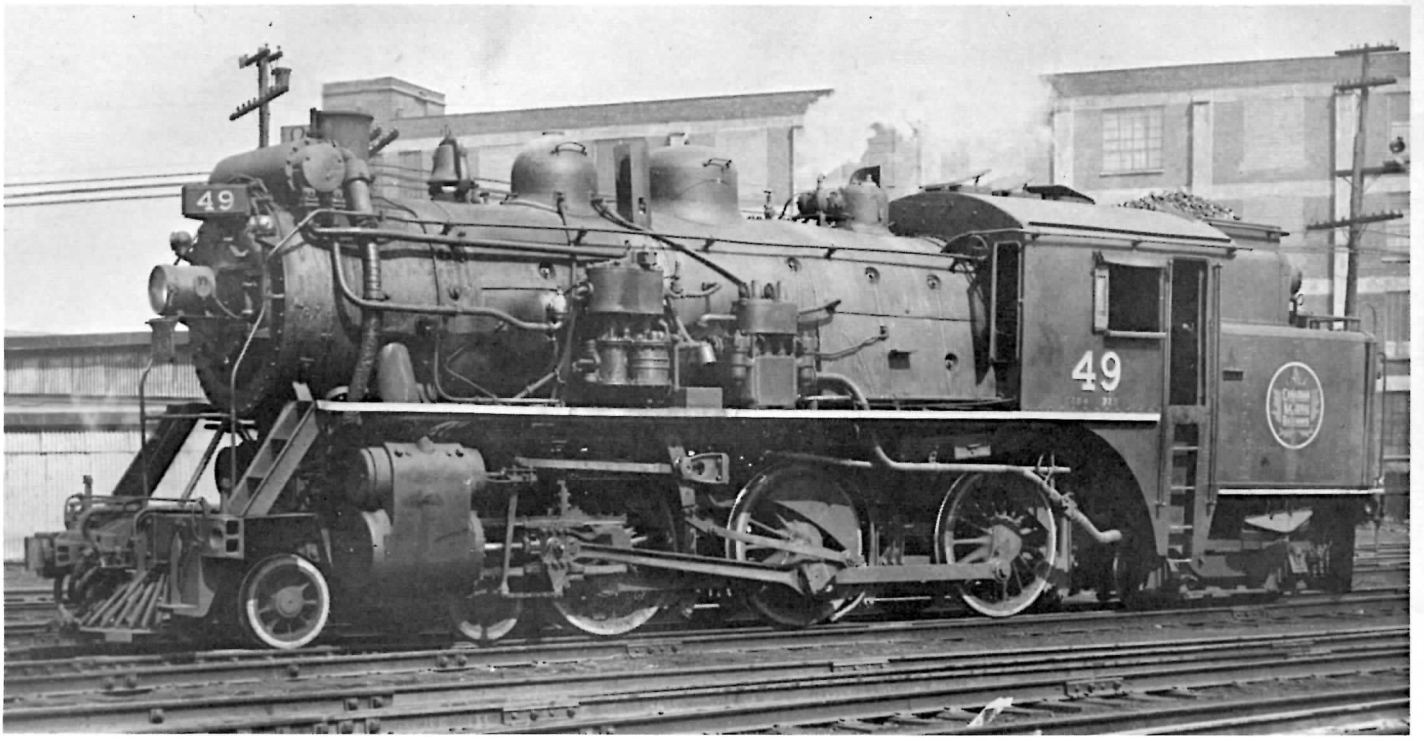
45-50



ABOVE: No. 49 at Turcot, near the end of its career.
/John Freyseng Collection

For many years, Canadian National Railways and its predecessor Grand Trunk operated a suburban service for residents of the 'Lakeshore' communities toward the west end of Montreal Island. The original service extended to Vaudreuil, some 26 miles; however, in latter years declining patronage (some of which, no doubt, was lost to the adjacent commuter operations of Canadian Pacific) forced its cutback to Dorval, and in their last years the CN trains served that community and such intermediate stations as Lachine, Convent and Dominion on their way to Central Station.

Since there were no turning facilities for locomotives at either Dorval or Vaudreuil, the suburban service required locomotives which were capable of operation in either direction equally well. This requirement was admirably fulfilled by the Forney-type locomotive, which carried its fuel and water supply in a small bunker mounted on a fixed extension of the locomotive frame. For bi-directional operation, it was sufficient merely to provide a reversible seat for the engineman, and a pilot and headlight on the rear end. (It should be noted that while a 'tank' locomotive -- which carries its water supply in tanks alongside or over the boiler and its fuel supply in a rear-of-cab bunker -- may be properly classified as a Forney, the term Forney, as in the case of the GTR/CNR engines, does not necessarily imply a 'tank' locomotive.)

The early 1900's saw the Montreal suburban runs being handled by 4-4-2-type Forneys, augmented as required by conventional 2-6-0's and 4-6-0's. However, by 1914 increased traffic and the introduction of heavier steel suburban cars all but overwhelmed the little 4-4-2's, and a larger and more powerful locomotive was introduced.

Grand Trunk Nos. 1540 to 1545, 4-6-4-type Forneys, were outshopped by Montreal Locomotive Works in September, 1914 and immediately placed in the Montreal-Vaudreuil suburban service for which they had been designed. One was assigned for a short time to Montreal-St. Hyacinthe trains but was shortly withdrawn in favour of heavier power. The 1540's performed well with their seven-car consists, demonstrating the rapid acceleration characteristics so desirable in a stop-and-go commuter operation.

In their design, particular attention was paid to the design of the firebox and brick arch, to ensure the maximum possible combustion efficiency with an attendant reduction in smoke, so important in urban areas. Since it was not desired to have more than two systems of equalization, the front truck was equalized with the driving wheels.

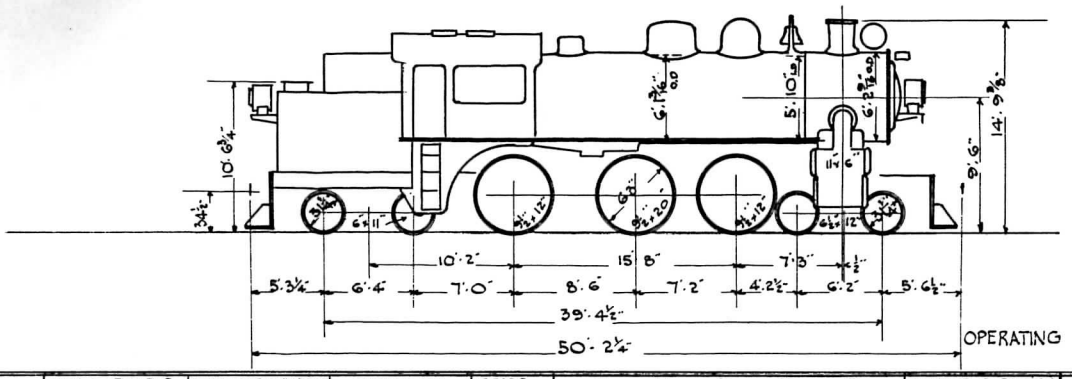
When they were absorbed into the Canadian National Railways roster in 1923, the GTR 1540's became CNR Nos. 45-50, class X-10-a. Under CN ownership, they remained in Montreal local service until the mid-1950's. In 1955, engine 48 was briefly assigned to Allandale, Ont., then to London, where it handled the local London-Sarnia service for over a year.

The diesel made its first inroads on the Forneys' empire in August, 1957 and by April, 1959 CN's Lakeshore commuter trains were fully dieselized; the trains themselves disappeared on June 30th of the following year.

Fifty per cent of the X-10-a class is preserved in museum projects: No. 46 by the Vaudreuil-Soulanges Historical Society of Dorion, Quebec; No. 47 by the Steamtown Museum of Bellows Falls, Vt.; and No. 49 by the Canadian Railway Museum at Delson, Quebec. Nos. 45, 48, and 50 were scrapped in August, 1956, January, 1959 and April, 1960 respectively.

SUB CLASS	DATE BUILT	BUILDER	BUILDERS ORDER No	BUILDERS BOILER Nos.	PREVIOUS ROAD Nos AND INITIALS	PRESENT ROAD Nos
X.10.a	1914	M.L.W.	Q241	54894 to 54899	1540 to 1545 G.T.R.	45 to 50

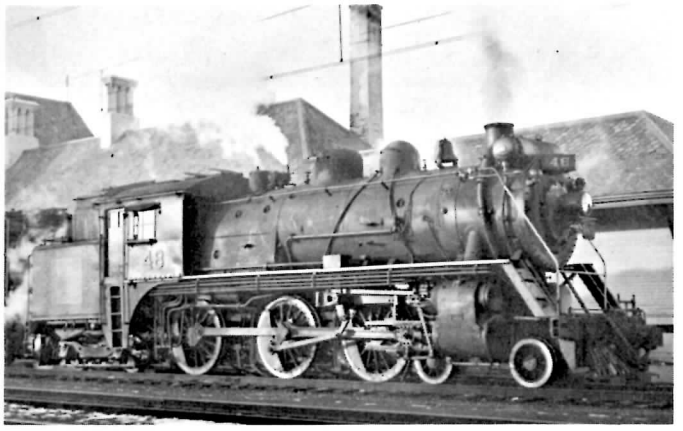
CANADIAN NATIONAL RAILWAYS
MECHANICAL DEPARTMENT
MONTREAL
TYPE **SUBURBAN** CLASS **X.10**



SUB-CLASS	CYLINDERS DIA.	CYLINDERS STROKE	DRIVING WHEELS O.S. DIA.	DRIVING WHEELS DIA. CTR.	FIRE BOX LENGTH	FIRE BOX WIDTH	GRATE AREA SQ. FT.	TUBES LARGE	TUBES DIA	TUBES SMALL	TUBES DIA	TUBES LENGTH	TENDER CAPACITY WATER	TENDER CAPACITY COAL	SUPERHEATER	HAULAGE RATING
X.10.a	21"	26"	63"	56"	129⅛"	75¼"	47	26	5⅜"	191	2"	11'-10"	2900 GAL	5 TONS	SCHMIDT	32%

SUB-CLASS	HEATING SURFACE □' TUBES	FIRE BOX	TOTAL	SUPER-HEATER	WEIGHTS IN WORKING ORDER Lbs. ENGINE TRUCK	DRIVING	TRAILING	TOTAL ENGINE	TENDER	ENGINE & TENDER	LIGHT WEIGHTS DRIVERS	TOTAL ENGINE	FACTOR OF ADHESION	MAXIMUM TRACTIVE EFFORT	BOILER PRESS
X.10.a	1628	160	1.788	342	49,000	146,000	80,000	275,000	—	—	131,400	222,800	4.49	32,487	210 □"

SUB-CLASS	TYPE OF VALVE GEAR	FEED WATER HEATERS	STEAM HEAT	No & SIZE OF AIR PUMPS	BRICK ARCH	EXTREME WIDTH
X.10.a	WALSCHAERT	SEE SPEC LIST	YES	1-8½cc	YES	10'-1"



ABOVE: Far from its normal haunts, X-10 No. 48 smokes up the catenary at Sarnia, Ontario in December 1956, as it awaits the departure of train 620 for London.

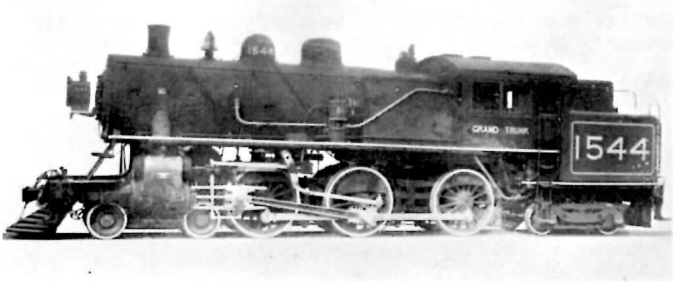
/R.J. Sandusky

ABOVE: In traditional action, No. 49 eases away from CN's old Dorval station with an inbound local.

/R.J. Sandusky

BELOW: Despite the addition of feedwater heaters and two-stage air compressors by CN, the X-10's changed little over the years.

/MLW



10¢

Upper Canada Railway Society
BOX 122 TERMINAL "A" TORONTO
LOCOMOTIVE DATA SHEET

No. 6712

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