newsletter

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Upper Canada Railway Society

newsletter

Number 245 June, 1966

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Please address NEWSLETTER contributions to the Editor at 3 Bromley Cres., Bramalea, Ontario. No responsibility is assumed for loss or non-return of material.

All other Society business, including membership inquiries, should be addressed to UCRS, Box 122, Terminal A, Toronto, Ontario.

The Cover

Next year will see two striking new faces on CN rails in the Toronto vicinity. Turbotrain will be streaking to Montreal in little over four hours, while Toronto commuters will enjoy subsidized comfort on GO-Transit. The details are on pages 94 and 100.

/Impressions by CN and GO

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* * *

There must be a number of our readers who are despairing of ever seeing their Bull Session contributions in print -- at least so it would appear from our record of the past few months. Unfortunately, space limitations and a super-abundance of newsy items have conspired against us. However, next month.....

It seems that everything is going up these days, and NEWSLETTER costs, unhappily, are no exception. A direct result of the findings of the UCRS Finance Committee will be seen next month, when the single copy price of the NEWSLETTER will be adjusted to 50¢.

* * *

Twice during the past month we have been favoured with enthusiastic announcements of new rail travel concepts; Canadian National took the wraps off its revolutionary Turbotrain while the Ontario Government described its new GO-Transit trains which Toronto area commuters will begin using next year.

In these days of increasingly hectic highway and air travel, it is difficult to conceive why the safety, comfort and speed of rail transportation would not automatically guarantee the success of these ventures. Clearly, an expenditure of, say, $10-million on a rail commuter service, subsidized or not, makes economic sense when compared with a figure as much as ten times as great for an expressway of equal capacity. Yet the competition will be stiff, for the inertia of established travel habits is not easily overcome.

However, given time, we are certain this passenger renaissance will succeed, as it deservedly should. Our hats are off to Canadian National and the Ontario Government for taking such positive, tangible action on a matter which is so definitely in the public interest.

/JAB

Regular meetings of the Society are held on the third Friday of each month (except July and August) at 587 Mt. Pleasant Road, Toronto, Ontario. 8.00 p.m.

June 17th; (Fri) Regular meeting, to be held at the Society's new "head office", 587 Mt. Pleasant Road. (From St. Clair Subway station, take the eastbound ST. CLAIR car to Manor Road and walk south a few doors.) Doug Sheldrick will discuss Mexican railways with slide and movie accompaniment.

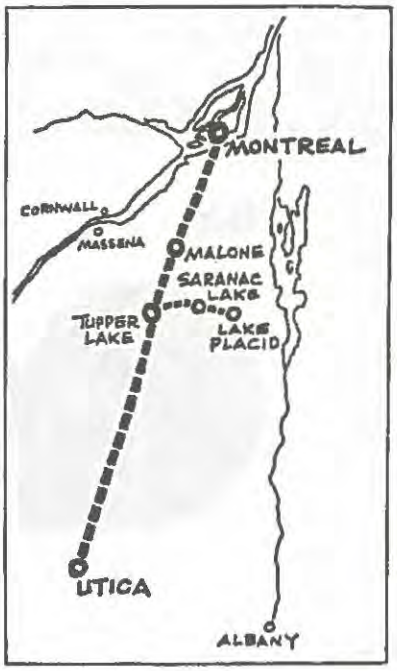
June 24th; (Fri) UCRS Hamilton Chapter regular meeting. Board Room, CNR James Street Station, Hamilton, Ont. 8.00 p.m.

July 15th; (Fri) A summer evening PCC excursion, complimentary to UCRS members. Non members will be charged the regular $2.00 fare. You MUST have your UCRS membership card with you. Full details are in the Traction Topics section of this issue.

Railway News and Comment

MONTREAL-UTICA MONORAIL PLANNED OVER NYC

Monorail fever is appearing again, this time as a proposal by a group of New York State businessmen who are planning the establishment of a rapid transit monorail system between Montreal and Utica, N.Y., on the roadbed of the NYC.



The group hopes to persuade NYC (or a similar large corporation) to build and operate the system. They estimate that the $600-million construction costs would be made up within ten years of operation, carrying 5 million passengers per year for as much as $100-million in fares.

The sponsors are presently awaiting the results of a feasibility study to determine the exact costs and potential revenue of the monorail. NYC declined comment on the plan.

CN TO INTRODUCE RESERVATIONS COMPUTER

Canadian National will initiate a new electronic reservations system on January 1st, 1967. The system, centred at the CNT Computer Switching Centre in Toronto, will be able to answer reservation requests from 37 Canadian cities and Chicago, in less than 10 seconds.

The new service, the only one of its kind in North America, will at first accomodate only coach seat reservations on CN's "name" trains; early in 1968, as personnel become fully trained and experienced, the system will be extended to include parlor and sleeping car reservations for the entire system.

The computer will make train reservations up to six months in advance, and will add and subtract train space to and from its inventory memory so that last-minute cancellations are possible while avoiding double-selling of the same space.

Smaller communities will be served through the nearest connected office by using existing high speed telecommunication facilities.

SERVICE, LINE CUTBACKS SOUGHT AND APPROVED

The BTC has approved CPR's application to abandon 14.5 miles of its Kingston Subdivision between Sharbot Lake and Snow Road, Ont. Originally running from Kingston to Renfrew, this line has been gradually dissected over the past few years. First segment to disappear was the 28-mile Calabogie-Snow Road line; the 'Renfrew spur', operating 14 miles from Renfrew to Calabogie, is still in service. In 1965, the Sharbot Lake-Tichborne portion was removed from service, eliminating a potentially useful link between CP's Belleville and Havelock Subdivisions. With the latest cutback, all that remains of the Kingston Sub proper, neglecting the Renfrew spur, is the 38-mile portion from Kingston to Tichborne.

Northern Alberta Railways has petitioned the BTC for permission to drop its twice-weekly service from McLennan, 50 miles south of Peace River, and Dawson Creek, B.C. NAR blamed improved highway conditions in the area for the estimated $79,149 loss sustained by the train during the past 12 months.

The once-fluorishing junction point of Lorneville, Ont., will disappear from CN timetables if a recent BTC application is successful. CN has petitioned to abandon the remaining 24 miles of the Midland Subdivision from Lindsay to Beaverton East, and the northernmost remaining 5.5 miles of the Coboconk Subdivision from Cannington to the Midland Sub connection at Lorneville. Several years ago, the Midland Sub was bisected by the removal of the Atherley-Beaverton East portion, and since that time, the eastern part of the line has virtually withered on the vine; part of the Midland Sub in the Northern Ontario Area still carries considerable traffic from Orillia to Midland, although at one time the entire line from Midland to Lindsay and Belleville supported a sizeable grain business, bypassing the congestion of the Toronto area.

Canadian Pacific has received BTC authority to discontinue Mixed trains 570/573, which provided a daily service between Fredericton and Chipman, N.B. At the same time, the Board authorized CN to operate over two sections of CPR track in New Brunswick. Involved are a 59-mile line between Newburg and South Devon, and a six-mile stretch between Newburg and Valley, near Woodstock, N.B.

OTTAWA UNION STATION TO CLOSE SOON

Ottawa's new Union Station near Hurdman in the city's southeast end is scheduled to open next month, rendering obsolete the famous old station on the banks of the Rideau Canal that was originally opened in 1912. July 16th is reported to be the last day of active service for the old building.

Some trackage is already disappearing in the Hurdman-Deep Cut area; CP's line from Deep Cut to a point across the Rideau River from Hurdman was abandoned on May 2nd, and CP trains now enter the old station environs via CN's Alexandria Subdivision. Some time ago, a portion of CN's Beachburg Subdivision was similarly retired, and CN trains reached Hurdman via a connection with the CPR at Smyth.

Canada's first specially-designed rail commuter service, to begin operation next year along the lakeshore, was officially christened "Government of Ontario Transit" on May 16th, as first details of its modern equipment and symbol were made public by Highways Minister C.S. MacNaughton.

The symbol has been designed in the form of the letters 'G' and 'O' in solid green welded together by the white horizontal and vertical bars of the letter 'T' lying on its side. It will be used to identify all trains, stations and other service facilities from those of other railways, and will form part of the short name, "GO-Transit", which is to be adopted for promotional purposes.

Tenders for locomotive-hauled coaches and self-propelled cars were called last Fall with final details of visual design to be worked out by the government and the manufacturer, Hawker Siddeley of Canada Ltd. The 85-foot long units will have a bright exterior finish of brushed aluminum with a band of white trim along the bottom edge of the sides. Extra wide automatic doors at both ends will permit capacity loading of 94 seated passengers in one minute. On entering, passengers will step into spacious vestibule areas that will eliminate crowding while they make their way to their seats.

The GO Sign for Metro's Commuters

A newly-designed bucket type seat has been developed to combine with the modern decor of the cars and provide a maximum of passenger comfort. Individual seat shells are made of fibreglass, softly cushioned,and upholstered in black and sand-brown colors of vinyl. Matching seat dividers will house recessed ashtrays. Three seats in sand-brown color will be installed longitudinally on either side of the vestibule areas and the remainder of the seats, upholstered in black, will be installed in pairs along both sides. A number of these will be in facing blocks of four for the convenience of commuters wishing to get together for conversation or card playing. The 94-seat plan adopted for the service is a more spacious layout than is usually provided in order to dispel any feeling of being crowded or cramped.

End panelling in the vestibule will be in a soft shade of green; sidewalls will be doeskin-colored; bulkheads will have facings of ebony and rosewood; ceilings will consist of milk-white translucent plastic panelling illuminated by concealed fluorescent lighting. Floors will be covered in a new process of highly durable and easily maintained plastic material that will give a marbled appearance.

The bulkheads, set off-centre to create a visual effect of reducing the cars' lengths, will be used for the storage of emergency equipment. Large, scenic-view windows in the cars will be of "gray light" glass, a process that reduces glare and heat penetration while providing maximum visibility. Each car will be equipped with its own thermostatically controlled air-conditioning and electric heating system, delivering a constant, uniform flow of filtered air under moderate pressure along the entire length of both sides, at window level. All trains will be equipped with two-way radio,and a public address system for station announcements and soft music.

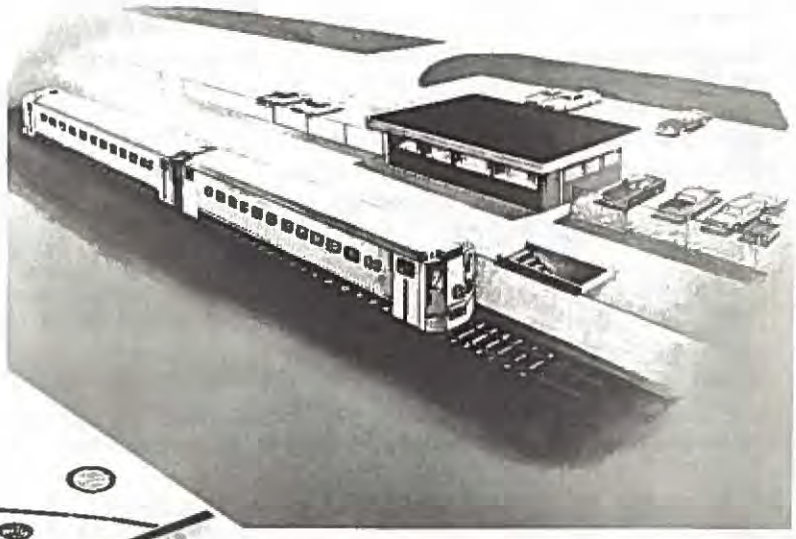
Because all trains will operate on the 'push-pull' principle, eight of the 40 coaches will be equipped with an engineman's cab containing remote control operating equipment linked to the locomotives. Two of the nine self-propelled cars will be equipped with controls at both ends for possible operation as single units.

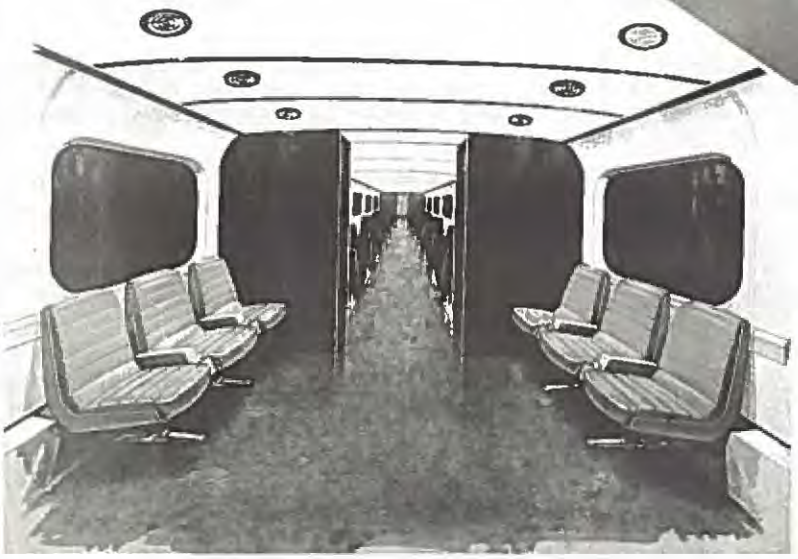
All operating ends of the coaches and self-propelled cars will be painted white to accent the clean, uncluttered exterior appearance. GO-Transit symbols will be displayed on the sides of all equipment and on the ends of all operating units. The locomotives will be painted in a striking black, white and green design.

By the selective use of aluminum and high-strength steels, tremendous weight reductions have been achieved, which will be reflected in higher acceleration rates and reduced operating costs. The coaches will weigh approximately 65,000 pounds, as compared with 122,000 pounds for existing similar equipment; the 90,000-pound self-propelled cars will be 51,000 pounds lighter than conventional RDC's.

Construction of GO-Transit's rolling stock will commence in late June, while track and signal modifications along CN's Hamilton-Dunbarton right-of-way will begin in early summer. The new trains will begin rolling in the spring of 1967.

RIGHT: The GO-Transit prototype station complex, now under construction at Rouge Hill, near Port Union, is depicted here. The ticket office will be of modular aluminum and glass construction. An under-track tunnel connects the two passenger platforms.





LEFT: This interior view from the car vestibule clearly shows the air of spaciousness that has been achieved in GO-Transit cars. The entire ceiling in the main seating area is translucent, and illuminated from above by fluorescent lighting.

NOTE: Additional GO-Transit information may be found in the following NEWSLETTER pages:

1965 Volume; Page 92 (June), 115 (July), 148,152 (Sept), 170 (Oct), 207 (Dec);
1966 Volume; Page 22 (Feb), 43 (March), 61 (April), 81,82 (May).

ALBERTA RESOURCES RAILWAY UNDER WAY

Construction of the Alberta Resources Railway was officially begun on May 9th at Solomon, Alta., when the Alberta Industry Minister joined two lengths of rail with a chrome bolt, symbolizing the joining of the ARR to the CNR main line. The new railway is being built from Solomon, 190 miles west of Edmonton, to the junction of the Smoky and Muskeg Rivers in the mineral-rich northwestern part of Alberta.

CN is building the line for the Alberta government, which hopes to develop more fully the province's inaccessible resources. CN will operate the line, paying a rental to the ARR on the basis of tonnage hauled. The big question, however, and one that no one seems to have the answer to, is who will actually carry out the development work for these untapped riches.

MONTREAL 'RAPID TRANSIT AUTHORITY' PROPOSED

Seven northern Montreal municipalities will seek permission to establish a "Rapid Transit Authority" to undertake conversion and subsequent administration of CN's Mount Royal Tunnel line. The members of the Rapid Transit Action Committee have become alarmed of late over rumours that CN will convert the line to interprovincial traffic in 1967, and indeed have specifically (and dramatically) called on CN to confirm or deny that its Turbotrains will "sound the death knell for its local commuter system". While the committee is "ready and anxious to assume their responsibility in the matter", we wonder where they were two years ago when the line was available for one dollar.

(See April NL, page 63)

WORTH NOTING:

-The Commons Transport Committee wants to hear CP prexy Ian Sinclair before preparing its final report on CP's passenger service; an interim report on the Committee's thoughts regarding summer services this year and next will be issued shortly.

-CN's Atlantic Region is pioneering a mechanized car distribution system which will enable the railway to keep a current record of all cars, regardless of location.

-The Brotherhood of Locomotive Firemen and Enginemen plans to seek a certification vote among CN engineers who are represented by the Brotherhood of Locomotive Engineers. The BLFE expects that the theme of unity will encourage all BLE enginemen to join the BLFE.

-Public address announcements on CN's "Rapido" are now being made in French as well as English, from pre-recorded tapes.

-A suggestion by a Liberal MP that railways in the lower B.C. mainland area merge their operations was met by a resounding NO from CPR, PGE and B.C. Hydro.

-CN has established a 'Linguistic Services' Bureau to encourage the use of French in dealing with the public in Quebec, and to provide proper French terminology for terms peculiar to railroading; the rulebook has even been translated into French.

-CN's Pt. St. Charles shops in Montreal was hit by a wildcat strike on May 24th, staged to protest rumored delays in new wage contract negotiations.

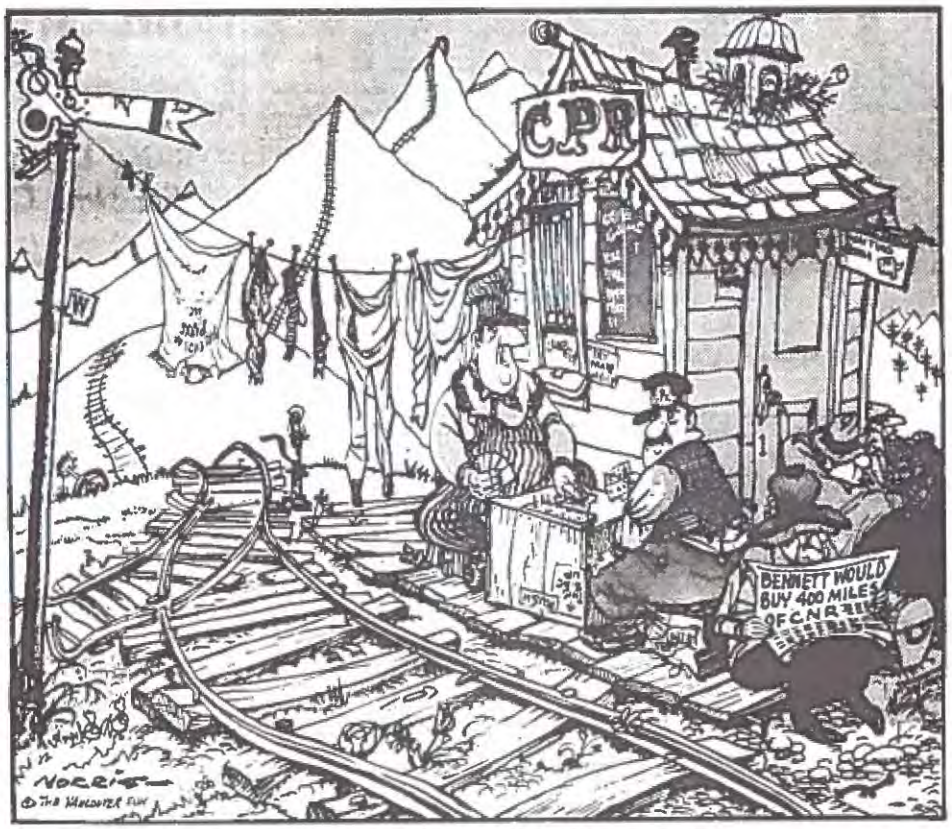
-At hearings on Air Canada and CPA applications to permit the serving of liquor on flights over Ontario, temperance advocate Dr. J.R. Mutchmor referred to CN's "Rapido" as the "biggest bar in Canada".

-BTC approval has been given to the railways' application to increase demurrage charges. (February NL, page 25) Also on the subject of freight car rental charges, the U.S. Senate has approved a bill which would authorize the ICC to set higher per diem rates, charges for freight cars owned by one railroad that are in use on another line.

-The CBRT&GW has called a strike vote among its 22,000 non-operating Canadian rail workers to empower negotiators to call a walkout whenever they feel it necessary. The move was taken to protest delays in conciliation procedures.

-Representatives of Quebec province and the CNR were present at a recent meeting called by Montreal South Shore municipalities to study increased commuter service from the area to Montreal.

-A wildcat strike on the Long Island Railroad on May 11th was precipitated by (of all things) an LIRR executive luncheon at which liquor was served, and protested the punishment of train service employees for drinking beer with lunches.



/The Vancouver SUN

"Relax . . . it's CN he wants and it's your crib."

PASSENGER FARES UP AGAIN ON CP

In a move which left basic fares virtually unaltered but hiked accomodation charges by as much as 50%, Canadian Pacific has made travel on its transcontinental route up to 36% more expensive this summer, taking CP another step away from direct fare competition with CN.

CN has also raised its accomodation charges for the peak travel period, but its biggest increase from last year's rates was a relatively insignificant $9.

Last summer, CP raised coach fares to a nickel a mile on routes not directly competitive with CN. Effective June 1st, Canadian Pacific is charging $232 for a drawing room with meals from Montreal to Vancouver, compared with $171 last summer and CN's maximum of $146; rates for other accomodations and destinations are proportionately affected. A CP spokesman is quoted as saying, "The new prices reflect a more realistic pricing in view of the space and service we offer."

BENNETT WANTS TO BUY CN PRINCE RUPERT LINE

British Columbia Premier W.A.C. Bennett would like to see the provincially-owned Pacific Great Eastern take over Canadian National's 470-mile Prince George-Prince Rupert line for a "nominal sum" and purchase CN's harbour holdings at Prince Rupert, with a view to creating a major Pacific port there. However, CN officials claim that no proposals have been made to them, and in any event the line is not for sale. •

■ ■ ■

World Railway News

...Edited by Peter Meldrum

* On May 22nd, German Federal Railroad's Hamburg-Munich "Blauer Enzian" became Europe's fastest passenger train, operating for the first time on a schedule which calls for speeds up to 125 m.p.h. Previously, the Italian State Railways' "Settebello" held the distinction, reaching a top speed of 113 m.p.h. at places on its Milan-Rome run; in regular service, however, this train operates at 100 m.p.h., and is in the same category as the French "Mistral" (Paris-Marseille), the British "Flying Scotsman" (London-Edinburgh) and the German "Rheingold" (Amsterdam-Geneva) and "Rheinarrow" (Dortmund-Muenchen).

* British Rail will operate a hovercraft ferry service between Portsmouth and the Isle of Wight, beginning this summer. Initial operation will employ a 9-ton craft capable of carrying 38 passengers at speeds up to 56 knots. It will be followed early in 1968 by a 160-ton vessel carrying 500 passengers (or 250 passengers and 32 cars) at the staggering speed of 90 knots; this vessel may later join the cross-Channel service to France.

* An organization called the Villa Fiesta Mexicana is promoting the idea of a "pullman city" to house visitors to the 1968 Olympic Games at Mexico City. Apparently this group has lined up some 308 'compartment type' sleepers from U.S. railroads, and hopes to arrange transportation to the Games in this equipment.

This idea is not new, and recalls such spectacles as the Shriners "Fez Cities" which manage to spring up at virtually every city in which this organization holds its convention.

* For the benefit of UCRS members who may be visiting England this summer, the following steam notes may be of interest:

The only station in London at which steam abounds is Waterloo, from which 'Merchant Navy' and 'Battle of Britain' 4-6-2's operate to Southampton, Bournemouth and Weymouth. Since this will probably be their last season, these 4-6-2's are a must.

Towards the north, the next major steam outpost is the Chester-Holyhead line. Most of the locomotives here are based on Chester, although some operate through from Crewe, being mostly BR Standard classes with a sprinkling of ex-LMS types as well.

From Crewe north on the line to Carlisle, most of the freight is steam-hauled, with 'Britannias' and 9F 2-10-0's predominant. The area around Tebay is particularly fascinating because of the profusion of bankers from Tebay to Shap Summit. Carlisle Kingmoor shed at Carlisle boasts the largest allocation of steam in England, with engines operating south to Crewe and north to Glasgow and Perth. While normally assigned to freight work, steam occasionally appears on extra passenger trains during summer months.

In Scotland, steam regularly handles passenger trains between Glasgow and Perth, Dundee and Aberdeen. Based on Aberdeen are the five remaining Gresley A4's, and these are rostered to regular passenger workings as are multitudinous Class 5 4-6-0's. Some 'Britannia' 4-6-2's can also be found here. In the Edinburgh region, three passenger trains and several local freight workings boast steam power.

Some small steam engines can be found in the North Blyth area near Newcastle, working coal trains to the docks. The USA 0-6-0's are still holding their own on Southampton Docks.

Good Luck! •

Equipment Notes...

CANADIAN NATIONAL MOTIVE POWER NOTES

CN took delivery of Century 424 units 3205/11 during May.

The first AC/DC locomotives in Canada, CN's GP-40's began appearing in May as well. Nos. 4002/03 were received from GMD in London on May 24th, while units 4004/05 appeared on May 27th. All of the 4000-series units will be assigned to Toronto Yard.

ALCO DEMONSTRATORS VISIT CANADIAN LINES

Following close on the heels of the apparently successful tour of GM's SD-40's on CP and CN, was a pair of brand new Century 630 units from Alco Products, which made brief excursions over both major lines in late May and early June.

The locomotives, actually en route to their new owner, Union Pacific (and painted as UP 2903/04), were delivered to CP at St. Luc by the D&H on May 21st. CP testing took place on runs from Montreal to Windsor and Revelstoke, following which they were turned over to Canadian National for tests on the Montreal-Halifax circuit.

Just what the effect of these six-motor demonstrations will be is difficult to assess at this time. Canadian Pacific has already committed itself to 32 six-motor GMD units, but so far CN seems unconvinced, with all of its current orders being for conventional four-motor units. There are, of course, correct applications for both types of motive power, and it remains to be seen how each road will assign its second generation diesels.

CN PLACES LARGEST CONTAINER ORDER

The largest single road-rail container order ever placed in Canada, for 492 units, was announced recently by CN. The containers, called "Railtainers", are being built by Steadman Industries Ltd., of Cooksville, Ont.

The containers are transferred to and from special flatcars by means of a hydraulic mechanism which slides the container sideways between the car and the truck chassis. No special loading ramp is required as with conventional piggyback, nor must the containers be loaded in piggyback's one-after-the-other manner. Thus it would appear that the Steadman containers have some strong arguments in their favour in the competition between containerization (COFC) and conventional piggyback (TOFC).

CN has 200 specially-designed container flatcars on order with delivery to start in August; the 62-foot long cars can transport three units each. In addition, 105 road vehicles equipped with transfer mechanisms have been ordered.

See August, 1965 NL, page 134; April, 1965, page 48.

MORE NEW EQUIPMENT FOR CN

In addition to the leased equipment listed on page 64 of the April issue, Canadian National has purchased a number of new pieces of equipment to meet its growing travel market:

BOSTON AND MAINE:

*RDC-1 6106 becomes CN D-118
RDC-2 6200 becomes CN D-206

*6 section, 6 roomette, 4 double bedroom sleepers, built by Pullman, 1954;

31 Rye Beach
32 Salisbury Beach
33 Dartmouth College No. 1
34 Dartmouth College No. 2

(CN names for these cars will be 1192, Greendale; 1193, Green Harbour; 1194, Greenhurst; 1195, Greenwald: Assignment of names to particular cars has not yet been made.)

NORFOLK & WESTERN (ex-NKP):

*10 roomette, 6 double bedroom sleepers, built by Pullman. Unlike other CN 10-6's, these cars have the bedrooms located in the centre of the car;

204 City of Painesville
205 City of Erie
208 City of Kokomo
209 City of Muncie
212 City of Fort Wayne

(CN names for these cars will be Riverdale, Riverlea, Riverside, Riverfield, Riverview: Assignment of these names to particular cars has not yet been made.)

Three further sleeping cars have been leased for a two-year period, for service on trains 9 and 10 between Jasper and Prince Rupert. These unique Baltimore and Ohio cars recently operated on the "Florida Special"; the cars are equipped with 5 roomettes, 3 drawing rooms, 1 bedroom, and a "Strata Dome" seating 24 passengers. Batteries of floodlights are mounted on the car roofs. Car names follow:

7600 Moonlight Dome
7601 Starlight Dome
7602 Sunlight Dome

To ease the tight coach situation, CN is planning to lease about 25 airconditioned coaches from Canadian Pacific, for duty on secondary passenger runs.

NAR INTERESTED IN SIX-MOTOR UNITS

Usually reliable sources indicate that as a result of a temporary visit last winter to the Northern Alberta Railway of SD-9 units from the DM&IR, NAR is seeking permission from its owner lines, CP and CN, to acquire several new six-motor locomotives. The likely choice will be GMD's normally aspirated 2000 h.p. SD-38 model. No official statement has yet been made.

*Grand Trunk locomotives 4900 and 4931 have appeared recently sporting rotating yellow lights on the cab roofs.

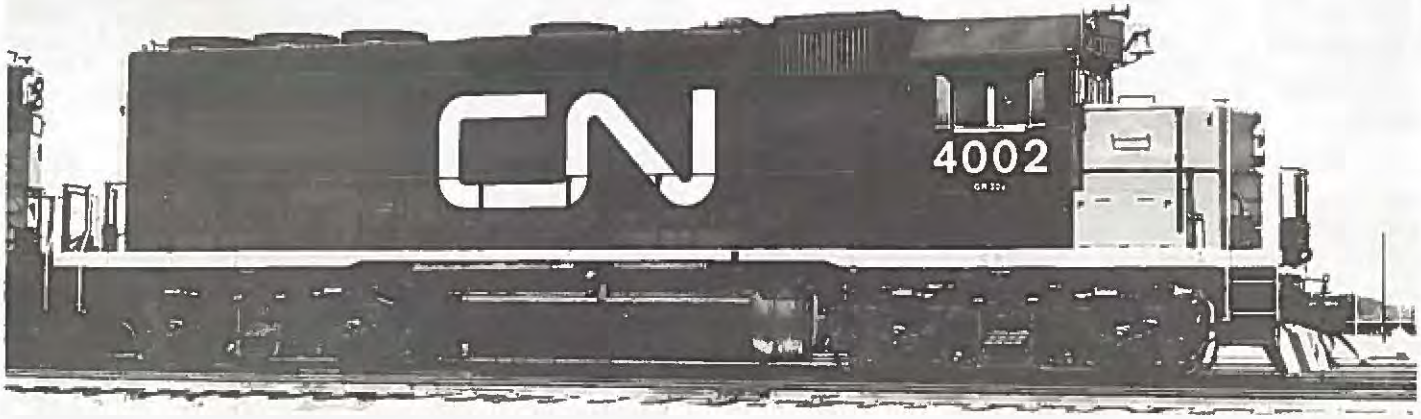
*The N&W cars 'City of Cleveland' and 'City of Chicago' were incorrectly described in the April issue; these cars have 5 double bedrooms, buffet-lounge.

ABOVE: Union Pacific's C - 630's 2904/03 are barnstorming for MLW as they roar through Innerkip, Ont. with CP train 904 on Victoria Day.
/J.A. Brown

UPPER LEFT: Ottawa's venerable Union Station will soon be only a memory; the station is seen here from Laurier Bridge, with CNR 6060 and CPR 2810, and their respective Montreal-bound trains.
/G.W. Thomson
R. Short Coll.

LOWER LEFT: CN's leased B&O Dome-Sleepers are destined for Jasper-Prince Rupert service. Here, "Starlight Dome" gets the 'CN look'.
/J.A. Brown

BELOW: Currently the highest horsepower single unit locomotives in Canada, CN's GP-40's are now being delivered, witness 4002 in Toronto on May 25th./J.A. Brown



TURBOTRAINS for CN

Confirming speculation of the past few months (May NL, page 81), Canadian National Railways announced on May 17th that it has entered into an eight-year lease and maintenance contract with United Aircraft Corporation for five seven-car turbine-powered train sets, to be used in Toronto-Montreal high-speed service.

CN president Donald Gordon noted that the contract with UAC might be termed a partnership arrangement whereby the railway and the manufacturer share the experimental costs, with the railway having an option for outright purchase. He added that the complete purchase option would likely be consummated over a period of eight years. Capital cost of the new equipment is just under $10-million, with improvements in signalling and trackwork (which will contribute to the efficiency of freight and conventional passenger traffic as well) estimated at an additional $10-million.

Delivery of the first two Turbotrains will be made in April, 1967, with two following in May and the last in June, so that a full service will be available in time to handle peak travel to Expo 67 during the Centennial.

In Canadian National's view, the Toronto-Montreal service offers the greatest profit potential of all its passenger services; for example, 20% more passengers are travelling CN on this line now than were carried one year ago by both CNR and CPR under the former pool service. The railway expects that this growth rate will continue, but only if additional capacity is made available.

This capacity cannot be provided by drawing equipment from other services, since many of them are expanding as well. In fact, in recent years CN has found it necessary to purchase or rent equipment from other railroads, besides renovating and restyling about 700 existing cars, to provide increased capacity and comfort. New equipment is required that will provide the best combination of technological improvement, economy of operation, passenger comfort, high utilization, all-round productivity and profitability. Turbotrain is CN's answer.

The new Turbotrains are longer versions of an experimental train which will enter service early in 1967 between Boston and Providence on the New Haven. The U.S. test runs are subsidized under a $90-million research program launched by the U.S. Commerce Department to find solutions to inter-city travel congestion in densely populated areas. CN's new service will be the first commercial test of the new concept.

Designed by United Aircraft Corporate Systems Center, of Farmington, Conn., the trains will be built by United Aircraft of Canada Ltd., with Montreal Locomotive Works as a major subcontractor. The finished trains will have a Canadian content of better than 70%.

Analyses by United Aircraft indicate that a seven-car Turbotrain of 340 passenger capacity, operating over a 330-mile route, would cost about 30% less per mile to run than a conventional train of the same capacity on the same route. When questioned about fare levels for Turbotrain, CN's passenger vice president Jean Richer indicated that these had not yet been established but that a premium might be charged for travel on the supertrain.

The Turbotrains will eventually allow CN to make the 334-mile run between Toronto and Montreal in less than four hours. Maximum speed of the Turbotrains will be 120 m.p.h, although initially they will be restricted to 90 m.p.h. With relatively minor alterations, the Turbotrains will ultimately be capable of 160 m.p.h. speeds. The fastest train in the Toronto-Montreal service at present, "Rapido", makes the run in one minute under five hours for an average speed of 67 m.p.h. Turbotrains will accelerate faster than conventional diesels, to about 100 m.p.h. within five minutes of start.

In operation, two train-sets will be coupled together to form a 14-car train; in this configuration, slightly greater seating capacity will be available than with "Rapido", and with better utilization of interior space. In the past, articulated trains have been handicapped by being of fixed size and capacity, unadaptable to changes in passenger loads. To increase the capacity of the Turbotrain, two or more sets can be simply and automatically coupled together. The streamlined ends of the Turbotrain are actually nose doors concealing an automatic coupler and passageway.

The trains will be bi-directional, eliminating turnarounds and reducing switching time; these advantages, together with the Turbotrains' speed potential, mean that each train will be capable of three one-way trips per day over the route.

Except for the fact that it will have steel wheels on steel rails, CN's Turbotrain represents a truly new concept in railway passenger equipment:

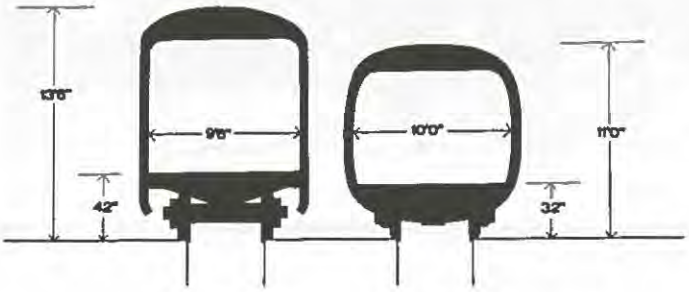
The Turbotrain is designed along aerodynamic lines to reduce "dead" weight and air resistance. It will be almost entirely of aluminum construction. The nose has a long streamlined look; the sides, roof and skinned belly are curved; the outer skin of the train is smooth, with flush windows and smooth outer diaphragms.

Turbotrains are not locomotive-hauled, in the accepted sense of the term. Each train-set is made up of two Power Dome Cars (PDC's) and five Intermediate Cars (IC's), all semi-permanently coupled. Each PDC is equipped with two United Aircraft turbines (modified models of the Pratt and Whitney PT6 aircraft engine) which weigh just 250 pounds apiece and are five feet long by 1½ feet in diameter; they will burn conventional diesel fuel and will be capable of developing up to 400 h.p. each. The turbines do not require warm-ups as diesels do,can be started easily at temperatures as low as 60 below zero, and can reach full power in less than 30 seconds from a cold start. They are virtually vibrationless and surprisingly quiet.

One PDC in each train-set is equipped with an additional turbine which drives an alternator supplying power for the train's heating, cooling and lighting systems, thus following the trend established on CN by the new Toronto Commuter equipment.

With the exception of the dome sections, the Turbotrains are 30 inches lower than conventional passenger cars, and provide an additional six inches of width. Floor height of the Turbotrains is 32 inches above rail level, as compared with 42 inches for conventional cars. Boarding from the low-level platforms of Toronto's Union Station, passengers will go up three steps into the train, while from the higher platforms in Montreal's Central Station they will descend two steps.

COMPARATIVE DIMENSIONS



CONVENTIONAL TURBOTRAIN

The standard trucks of conventional equipment are replaced in Turbotrain by a single axle located between adjacent car units, on which the suspension systems of the two cars are carried. The suspension system has inclined supported links which act through air cushion springs, supporting the car; in effect, this produces a pendulum-like action so that on curves the car bodies bank inward, not outward as with conventional equipment. Consequently, Turbotrains will be able to take existing curves at speeds up to 30% faster than is now possible, with a minimum of passenger discomfort. Also contributing to the superior riding qualities is the train's guided axle system. By use of a "turnbuckle" device, the train is positively steered, and depends on the wheel flanges to a lesser extent for this purpose; consequently, wheel and rail wear are expected to be reduced.

Turbotrain will be equipped with high-friction composition brake shoes and an electrically controlled braking system for reduced response time. The light train weight and precise control of braking will permit quicker, smoother stops. A secondary pneumatic brake control is provided as a backup safety feature.

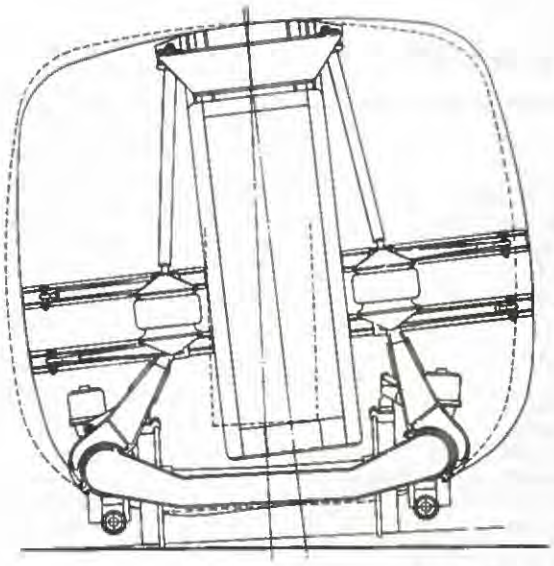
Many of the mechanical and electrical components of the Turbotrain will be constructed on modular principles so that in the event of failure, the component can simply be replaced, quickly releasing the train for normal operation; only the defective component will be removed from service. The new equipment will meet all safety and structural requirements of the AAR and BTC.

Passengers will enter and leave through sliding doors located at the centre of each car, and will have shorter distances to walk from the doors to their seats. There will be no doors between car units; passengers will have an uninterrupted view down the centre aisle.

Turbotrains will incorporate a number of new features in interior design. CN and UAC designers are working together to create an interior that will have a recognizable "CN look" and at the same time be totally new in the field of rail travel.

The cars will be slightly pressurized to keep out dirt, snow, noise and outside temperature extremes. Improved features will include better heating and air conditioning, more efficient noise suppression, greater seating comfort and an elegant interior environment. The train will be fully carpeted, with tinted glass and adjustable blinds at each window, soft indirect lighting and individually controlled reading lights for each traveller. All cars will be equipped with luggage compartments near the entrance doors, while coaches will boast overhead racks as well.

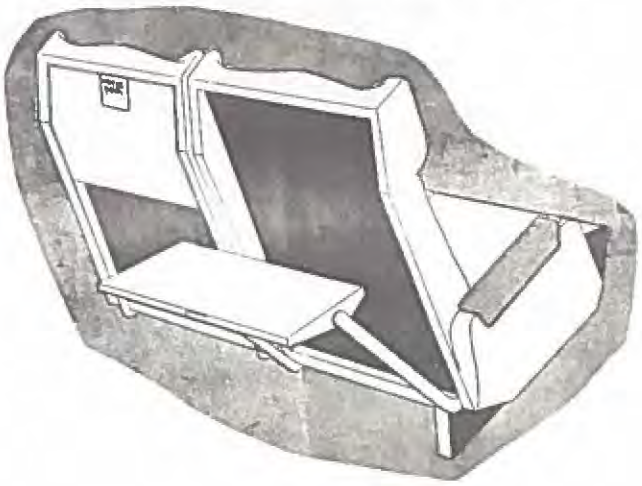
Twelve premium parlor seats will be available in the dome of each Power Dome Car, for a total of 48 seats under glass in each tandem train. The engineer will occupy a compartment at the forward end of the dome.

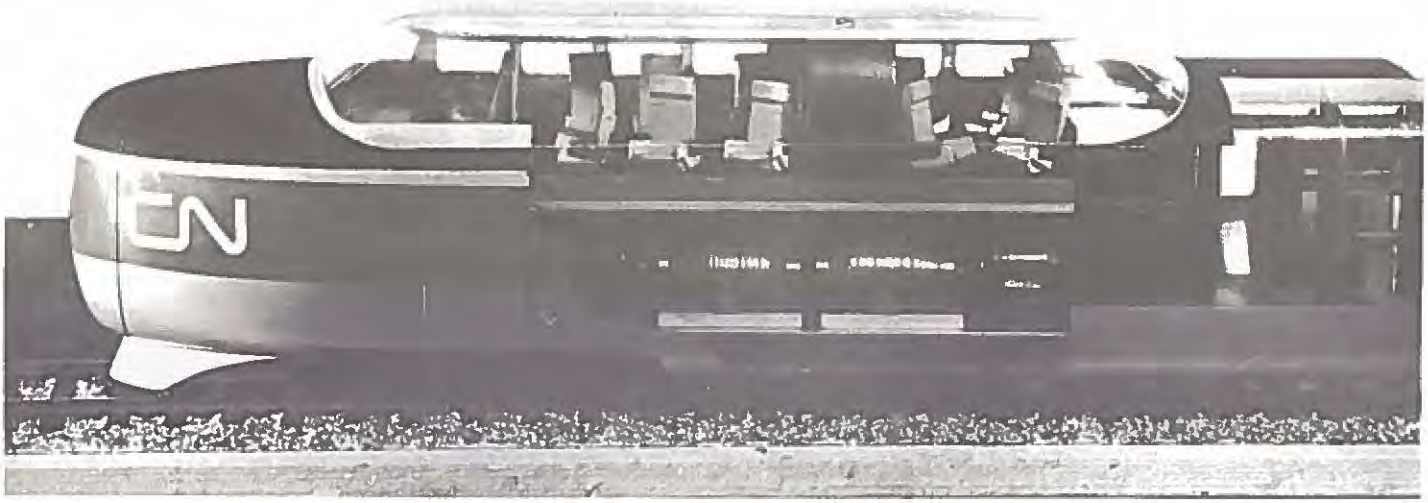


Train crew requirements have not yet been established, but discussions are in progress with union representatives of the employees involved and they have indicated that the unions will "not stand in the way of a non-stop run."

Canadian Pacific's new president, Ian Sinclair, expressed pessimism over the announcement, contending that the Toronto-Montreal route lacked the population density to support such a new and expensive investment in passenger equipment. He claimed that to realize the maximum potential speed from Turbotrains, CN would be required to spend a "fabulous sum" on rehabilitation of its track and elimination of grade crossings, to the extent that the railway would be forced to charge fares higher than those of the airlines. •

SEATS HAVE INDIVIDUAL TRAY TABLES FOR PASSENGER DINING





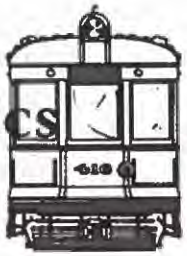
Readers' Exchange

FOR SALE: U.S. and Canadian traction negatives and slides, 10¢ to 25¢ each, also tickets, transfers, maps and BCER destination rollers. State your wants, no list. Wally Young, 3053 Admirals Road, Victoria, B.C.

WILL TRADE (not sell) CN employees' timetables for good 5x7 or 8x10 glossy photos of steam power of any Canadian road except CP, CN. One timetable for two 8x10 or three 5x7 acceptable prints. State wants. Will also trade two recent U.S. public timetables for each 8x10 as above. No quantity limit. State preference for area wanted. Wm. H. Coo, 252 Graham Blvd, Dorval, Que.

BELOW: NYC GP9's 7430/31/29 await a new assignment at CP's Toronto Yard. These units, together with a trio of TH&B Geeps, work through Toronto-Buffalo freight.
/P.A. Meldrum

Traction Topics



Edited by John F. Bromley

* On Friday evening July 15th, the annual evening street car excursion will be held. All UCRS members MUST have their membership cards on the car to present as fare, as all others will be charged the $2.00 fare. This trip is open to all Associate members who have not attended three meetings to date, as well as regulars. Several pickup points are scheduled, as follows: 7:30 p.m. on Connought at Queen St (you may not board the car in the carhouse); 7:45 p.m. on Richmond at Victoria Street; 8:05 p.m. at Queen and Bathurst and 8:20 p.m. eastbound on King at Yonge Street. We cannot pick up passengers at any other point. The car will be a Cincinnati air-electric, and the trip is to end at Russell Division at about 1:15 a.m., thus breaking the tradition of ending the trip at 11:00 p.m. Many interesting photostops have been planned, including one or two never featured on a UCRS evening trip.

In order that the proper number of cars can be chartered, it would be appreciated if those persons planning to attend would drop a card to J. F. Bromley, 32 North Drive, Scarborough, at the earliest possible moment, unless you plan to be in attendance at the June meeting. Please do not telephone! /JFB

* The threat of the first TTC strike since 1951 hangs over Toronto as this is written. A slowdown of services began May 26th as operators refused to work voluntary overtime. The slowdown results in approximately 300 surface vehicles being left in the yards during each rush hour out of a total of about 1400 normally used. The slowdown does not affect the subway system with regard to the number of trains, however several delays have occurred. TTC drivers currently earn $2.48 an hour, and they are looking for an increase of 62¢ an hour spread over 24 months. The TTC has offered 52¢ an hour spread over 30 months. Several other matters regarding working conditions are also in dispute. The dispute is presently under consideration by a conciliation board. A strike would appear to be a certainty sometime in mid-June.

Transit riders would not be nearly as inconvenienced should a strike occur as they were during the last strike, which took place in mid-winter. Many persons will undoubtably be on holiday as well. Two facts are certain. TTC fares will go up, probably to four tickets for 75¢, and many riders will turn their backs on the TTC. It is about time the civic government realized that public transit can no longer be expected to pay for itself. Traffic congestion in Toronto is second only to Los Angeles now, and Los Angeles has three times Toronto's population. If the Metro Toronto council does not act now, it may soon be too late. /JFB

* In a surprise move, west end merchants along Bloor Street asked the TTC on May 25th to replace the BLOOR SHUTTLE street cars with buses in order that overhead wires could be removed as part of a centennial redevelopment project. Commissioner Downey stated that such a conversion would take a lot of buses to replace the street cars. Commissioner Walton added that if the street cars are removed from Bloor Street, they would also have to be removed from Danforth Avenue. As it is now planned to remove the shuttle street cars after the opening of the subway extensions in December, 1967, it is highly unlikely that cars will come off before then, especially considering the expense the TTC went to in order to construct new looping facilities for shuttle street cars. A conservative estimate of the number of buses required to replace 17 BLOOR cars would be 26, thus adding to traffic congestion. Another factor against buses now would be the clamour raised by those persons who now want buses along the entire length of the subway. Their argument would be "look how easy it would be to extend the bus line". With the present wire removal program on Bloor and Danforth, street cars can not now operate between Dundas and Coxwell. /JFB

* Four new destination signs are being added to all 4300 and 4700 type cars, as well as all of 4460-4489, 4650-4674 and all Training cars. The new signs are on the side route linen, and are 15-Dundas West Station, 16-Broadview Station, 17-Runnymede and 18-City Hall. Also being added to destination linens of 4300 and 4700 type cars, and Training cars are 11-Luttrell and 55-Jane. It is also interesting to note that the new sign indexes in the PCCs, dated April 1, 1966 indicate signs which are red and white by an asterisk. The indexes state that the signs are red letters on white backgrounds while actually the opposite is true. /JFB

* The QUEEN street car route reverted to the pre-BLOOR/DANFORTH subway period timetable on May 22nd. With the change, all service formerly provided by QUEEN cars to Bingham Loop was taken over by bus route 22A-COXWELL. The return of KINGSTON ROAD-McCaul cars on Saturdays failed to materialize. Kingston Road patrons in the past have always resisted buses along Kingston Road, and it will be interesting to see their reaction now. Disappearing with the change is the one car per week between Bingham and Long Branch (see April NL, page 75).

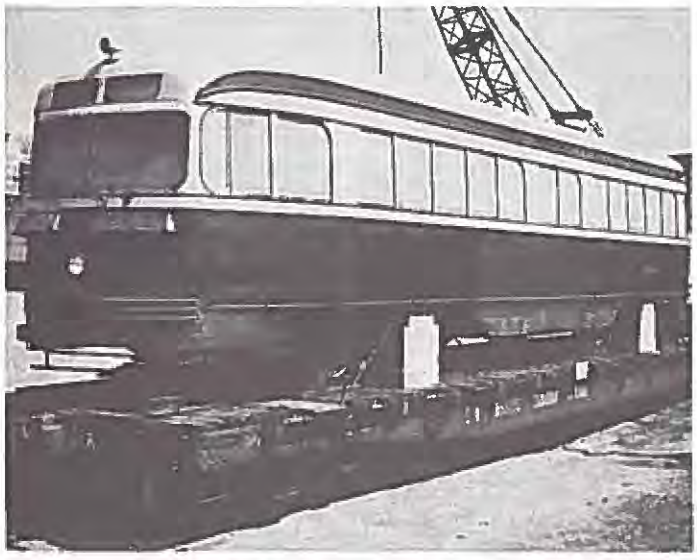
KINGSTON ROAD TRIPPER schedules have also been amended once again. Formerly, 18 cars were operated from each of Roncesvalles and Russell Divisions, wheras now Roncesvalles schedules 12 cars and Russell 24. Runs 79-90 in the a.m. rush and runs 63-74 in the p.m. rush are the new assignments from Roncesvalles. Runs 91-96 from Russell in the a.m. rush operate first from Russell to Roncesvalles, making their second trip between Bingham and York via Wellington. Runs 61-64 continue to make their second trip to York Street as well, thus there are now ten a.m. trips via Wellington Street. Only two runs, 61 and 62, operate via Wellington in the p.m. rush. These two runs continue to make a second p.m. trip between Bingham and Roncesvalles, returning again to Bingham and returning to Russell. /JFB

* De-electrification of un-needed trackage now is virtually complete, with one notable exception. The entire western end of the former HARBORD route remains intact and usable. Also usable is Lansdowne Avenue from College to Davenport Road. Removal of safety islands is now complete on Danforth Avenue, and fifteen feet of trackage was removed at Danforth and Coxwell Avenues. The Yonge Transferway demolition is complete, and removal of trackage on Pape Avenue was started May 17th. Part of Lipton Loop was also removed.

Trackwork on King Street West has been virtually completed between Bathurst and Spadina and between University and Yonge Street. The east to south (unused) curve at King and York was disconnected, as were both curves at Bay. The diamond at Bay Street was in place as of May 30th but should be removed in early June. The diamonds and all specialwork on Bay at both Adelaide and Richmond Streets were removed in early May with the assistance of Crane Car C-1 and Flat Motor W-4. The latter car used "wrong way" trackage on both streets to assist in the work. Both streets are one-way only.

Construction of the new Main Station Loop is behind schedule, as it was anticipated that the new loop would be usable by May 24th. As of May 30th, CARLTON cars continued to loop at Luttrell. /JFB, RM

* More alterations have been made to the TTC roster of electric switches. For some unknown reason, an SR switch has been installed on King Street at Shaw, east to north. The NA switch at King and Bathurst, west to north, reported as being removed, is still in place. SR switches have replaced both NA switches at Broadview and Gerrard, north to east and west to south, and a new SR switch has been added at Coxwell and Lower Gerrard, north to west. The NA switch at Coxwell and Upper Gerrard, north to east, has reverted to manual, however with the large number of car movements in rush hours to Coxwell and Danforth, it is expected that an SR switch will be installed here. /JFB



* As of May 30th, no less than 62 "Rotation" cars were available for service at Roncesvalles and Russell Divisions. These were:

4199, 4201/03/05/10/12/13/18/20/21/22/23/24/25
4226/28/29/30/31/32/34/35/36/37/38/42/45/46/49
4250/51/52/53/54/55/57/58/61/67/68/70/74/75/77
4278/79/90/91/93/94/99,4578/80/87/88/92/93/95
4598/99, 4600/01.

Other "Rotation" cars in service between April 28th and May 30th were:

4200/02/41/80, 4575/82/84/86/89/90/91/94/97.

SHORT TURNS

Training Cars 4300, 4301, 4302, 4495, 4496 and 4499 are at St. Clair Division as of May 29th, and are replaced at Russell and Roncesvalles by 4554, 4557, 4558, 4559, 4560 and 4565.....The A13 class PCC in dead storage at Hillcrest is 4721.....PCC 4000 remains at Hillcrest as the School of Instruction Training Car, while 4700 continues to operate at Roncesvalles.....PCC cars 4551, 4552 and 4553 have the automatic transfer machines installed and are used on the ROGERS line.....A9 class 4562 was recently completely painted and refurbished outside and inside, the first of this class to be so done in almost three years.....another oddly-coupled subway train has been identified as 5040-5213-5212-5041.....The TTC operated at a loss in March of 1966, for the first time in over three years. The loss was $52,435, but an operating profit of $4,086,950 was declared for 1965.....In a surprise about-face, the Bi-State street cars on route 15-HODIAMONT in St. Louis were abandoned on May 21st, with no less than 15 cars operating on the last day, an unheard-of number for St. Louis. To make things more realistic, however, four cars broke down and were not replaced in service. Bi-State repainted PCC 1629 to carry the mayor of St. Louis to festivities (sic) marking the occasion, however the mayor didn't bother to show up. 1628 was the last car from Suburban Gardens Loop, leaving eastbound to DeBaliviere carhouse at 9 p.m., an hour late. Six cars are to be sold to Tampico, the rest will be scrapped.....Watch for Pittsburgh's routes 39 and 40 to quickly follow route 85 into limbo, and routes 64 and 67 should go by Labour Day. The 87-ARDMORE line will be around for some time to come, as PAT must maintain trolley service to keep its franchise for 67F-TRAFFORD buses on Ardmore Blvd.....MU PCC 4698 is back in service, complete with coupler, while 4359 and 4672 repose at Hillcrest.....● /JFB, RM, SS

LEFT: TTC 4114, recently shipped to Alexandria, Egypt, was photographed in mid-April in Toronto, prior to its rail journey to New York. (May ML, page 89) /CNR

To drop any section other than the last, when there are more than two sections, (6) will be used.

(6) **Eng 423 is withdrawn as First 2 at G. Following sections change numbers accordingly.**

Eng 424 is withdrawn as Second 2 at G. Following sections change numbers accordingly.

The engine named will drop out at the designated point, and following sections will take the next lower number.

To substitute one engine for another on a section, (7) will be used.

(7) **Eng 426 instead of Eng 424 display signals and run as Second 2 R to Z.**

The second named engine will drop out at the point first designated and be replaced by the first named engine.

Following sections need not be addressed.

If the second named engine is the last section, the words "display signals and" will be omitted.

To pass one section by another, (8) will be used.

(8) **Engs 425 and 424 reverse positions as Second and Third 2 H to Z.**

Conductors and enginemen of the trains addressed will exchange train orders and arrange signals accordingly. Following sections, if any, need not be addressed.

Each section affected by these orders must have copies and arrange signals accordingly.

When a section is created at an intermediate point of a schedule, a copy of the order must be given to other trains affected.

To discontinue the last section from initial station or any intermediate point, Form K must be used.

Form G—EXTRA TRAINS.

(1) **Eng 745 run extra A to F.**

---

(2) **Eng 745 run extra A to F and return to A (or C).**

The extra must go to F before returning to A (or C).

To comply with Example (4), this may be modified by adding:

Extra 745 East has right over westward extra trains A to F.

---

(3) **Eng 437 run extra leaving A on Thursday March 26th as follows with right over all trains**

Leave	A eleven oclock	1100 pm
	C eleven fifteen	1115 pm
	D eleven thirty	1130 pm
	E eleven fifty	1150 pm
Arrive	F twelve oclock	1200 night.

This example may be varied by specifying the character of the extra and the particular trains over which the extra shall, or shall not, have right. Trains over which the extra has thus been given right must clear the time of the extra as prescribed by the rules.

An extra train authorized by this form of order must not pass the designated points before the times given and must move within yard and station limits the same as any other extra train.

Work extras over which the extra has thus been given right must be instructed by separate order, Example (3) of Form H, to clear the extra, and the extra train must not enter the working limits until copy of such order is received.

(SINGLE TRACK)

Extra trains should be operated in one direction only, where practicable. When necessary to operate an extra train in the opposite direction, such movement must be protected against opposing extra trains, as —

(4) **Eng 745 run extra A to Z (or A to G) with right over westward extra trains.**

Extra trains over which the train has thus been given right must clear the train as prescribed by rule unless train orders otherwise provide.

When an extra train is to meet an opposing extra train at its initial station, the running order should read as follows:

(5) **After Extra 733 West arrives at A Eng 755 run extra A to G etc.**

The extra authorized by this example must not leave A until Extra 733 West has arrived.

Form G orders do not give the extra train right to occupy the main track between the switches of the siding at the initial or terminating station, unless the order otherwise prescribes.

Form H—(SINGLE TRACK) WORK EXTRAS.

(1) **Eng 733 work extra**

seven thirty	**730 am**
until six thirty	**630 pm**

between D and F.

The work extra must, whether standing or moving, protect itself against extra trains within the working limits in both directions as prescribed by the rules. The time of regular trains must be cleared.

This may be modified by adding:

Not protecting against eastward extra trains.

The work extra will protect only against westward extra trains. The time of regular trains must be cleared.

Not protecting against extra trains.

Protection against extra trains is not required. The time of regular trains must be cleared.

When more than one work extra is to work within the same working limits (2) may be used.

(2) **Engs 733 and 734 work as two 2 work extras**

seven thirty	**730 am**
until six thirty	**630 pm**

between D and F protecting against each other.

The modifications shown under (1) may be used, and the same instructions apply.

Under this example, if protection other than that prescribed by Rule 99 is to be provided, conductors and enginemen of work extras required to protect against each other must first have a thorough understanding in writing as to the movements of each work extra and the protection to be provided.

When a work extra has been instructed by train order to not protect against extra trains, and it is desired to have it clear the track for (or protect itself against) designated extra trains, a separate train order must be given, as —

(3) **Work Extra 733 (or Work Extra 733 and Work Extra 734) clears (or protects against) Extra 760 West between F and E after two ten 210 pm between E and D after two thirty 230 pm.**

Extra 760 West must not enter the limits specified before the times stated, and will then run expecting to find the work extra (or work extras) clear of the main track (or protecting) as the order may require.

To instruct a work extra to clear an extra train authorized by Example (3) of Form G, the following example will be used.

Work Extra 733 (or Work Extra 733 and Work Extra 734) clears Extra 437 East between D and F.

To enable a work extra to work on the time of a regular train (4) will be used.

(4) **Work Extra 733 protects against No 79 Eng 451 and No 76 Eng 453 between D and F.**

The work extra may work upon the time of the train or trains named in the order and must protect itself against such train or trains as prescribed by the rules.

The regular train or trains receiving the order will run expecting to find the work extra protecting itself.

When a work extra is to be given exclusive right over all trains (5) will be used.

(5) **Work Extra 733 has right over all trains between D and F**

seven thirty	**730 pm**
until eleven thirty	**1130 pm.**

This gives the work extra exclusive right to the track between the points designated, between the times named, and other trains must not enter the limits unless written permission is obtained from conductor and engineman of the work extra, in which case, when practicable, the train dispatcher should be advised by the conductor of the work extra.

The working limits should be as short as practicable, to be changed as the progress of the work may require.

Work extras must give way to all trains as promptly as practicable.

Whenever extra trains are run over working limits, they must be given a copy of the order sent to the work extra.

Should the working order instruct a work extra to not protect against extra trains in one or both directions, such extra trains must protect against the work extra. If the order indicates that the work extra is protecting itself against other trains, such trains will run expecting to find the work extra protecting itself.

(TWO OR MORE TRACKS)

(6) Eng 733 work extra
on eastward track (or both tracks)
(or tracks specified by number)
seven thirty 730 am
until six thirty 630 pm
between D and F.

The work extra must, whether standing or moving, protect itself within the working limits against extra trains moving with the current of traffic on the track or tracks named. The time of regular trains must be cleared.

The same modifications shown under (1) and the examples as given for work extras on single track may be used and all instructions covering single track work orders apply.

When a work extra is given an order "Not protecting against extra trains", authority is conferred to move in both directions on the track or tracks named. The time of regular trains must be cleared.

(1), (2) or (6) does not give the work extra right to occupy the main track between the switches of the siding at either of the stations named, unless the order otherwise prescribes.

When it is desired to move a train against the current of traffic over working limits of a work extra, the work extra must be instructed to be clear of the track affected, as —

(7) Work Extra 733
clears Extra 760 West
on eastward track
between E and D
after two ten 210 pm.
Extra 760 West moving against the
current of traffic
E to D.

Extra 760 West must not enter the working limits before the time stated, and will then run expecting to find the work extra clear of the track affected.

Work Extra 733
clears No 76 Eng 453
on westward track
between D and E.
No 76 moving against the current
of traffic
D to E.

The time of the regular train must be cleared on the track affected.

Form J—HOLDING ORDER.

(1) Hold No 2 Eng 402.

---

(2) Hold all (or eastward) trains.

When a train has been so held it must not proceed until the order to hold is annulled, or an order given to the operator in the form:

may go.

These orders will be addressed to the operator and acknowledged in the usual manner, and must be delivered to the trains affected.

This form will be used only when necessary to hold trains until orders can be given, or in case of emergency.

Form K—ANNULLING A SCHEDULE OR A SECTION.

(1) No 2 (or Second 6)
due to leave A
Thursday March 26th is annulled
A to Z.

---

(2) No 2 (or Second 6)
due to leave A
Thursday March 26th has arrived at E
and is annulled E to Z.

The schedule or section annulled becomes void between the points named and cannot be restored.

Form K will not be combined with other forms of train orders.

Form L—ANNULLING A TRAIN ORDER.

(1) Order No ten 10
(or ten 10 of March 26th)
is annulled.

If the order to be annulled is of a previous date the annulling order must so state.

---

(2) Order No ten 10
(or this order) is annulled
at ten thirty 1030 am.

(2) may be used when it is desired that an order shall be annulled at a specified time and when so used the order becomes void at the time stated.

When delivery of an order to a train is not required, the annulling order will be addressed to the operator only, who will destroy all copies of the order annulled except his own, and write on that "Annulled by Order No. ".

If a Form L order is to be delivered to a train, such train must have a copy of the order annulled.

An order which has been annulled must not be re-issued or reinstated under its original number.

Form M—ANNULLING PART OF A TRAIN ORDER.

(1) That part of
Order No ten 10 reading
pass No 1 Eng 401 at G
(or and meet No 2 Eng 402 at J)
is annulled.

This form will be used only when that part of the order not annulled is clear in its wording.

A part of an order which has been annulled must not be re-issued or reinstated under its original number.

Form P—SUPERSEDING A TRAIN ORDER OR A PART THEREOF.

This order will be given by adding to prescribed forms the words "instead of "

(1) No 1 Eng 401
meet No 2 Eng 402
(or pass No 3 Eng 403)
at C instead of B.

---

(2) No 4 Eng 456
meet No 1 Eng 462
at C instead of B.
No 4 take siding at C.

An order, or part of an order, which has been superseded must not be re-issued or reinstated under its original number, and an order, or part of an order, superseding a particular movement must not itself be superseded.

A superseding order must not be delivered to a train prior to the delivery of the order which is superseded.

When a train has been directed by train order to take siding for another train, such instructions apply only to that order, that train and station named, and do not apply to the superseding order unless so specified.

Form Q—NOTICE OF NEW TIME TABLE OR SUPPLEMENT.

(1) Time table No eighteen 18
(or supplement No one 1 to
time table No eighteen 18)
is effective at
twelve nought one 1201 am
Sunday May 2nd.

Trains or engines must not occupy the main track after the effective time and date specified until copies of the new time table or supplement have been received.

Form R—(TWO OR MORE TRACKS) PROVIDING FOR MOVEMENTS AGAINST THE CURRENT OF TRAFFIC.

(1) No 1 Eng 401
(or No 1 Eng 401
No 3 Eng 402
and No 5 Eng 403)
has (or have) right over opposing trains
on eastward (or No 2) track
F to C.

The designated trains must use the track specified between the points named and have right over opposing trains on that track between those points. Unless otherwise specified, the right conferred extends only to the first crossover switch at the point last named. Opposing trains must not leave the point last named until the designated trains have arrived.

The designated trains must move at restricted speed within yard limits.

All trains between the points named moving with the current of traffic in the same direction as the designated trains must, when practicable, receive a copy of the order and may then proceed on their schedules or rights.

The designated trains must be given copies of all train orders affecting them on the track named.

This may be modified as follows:

(2) After No 4 Eng 404
arrives at F
No 1 Eng 401
has right over opposing trains
on eastward (or No 2) track
F to C.

The train to be moved against the current of traffic must not leave the first named point until the arrival of the first named train.

A train must not be moved against the current of traffic until the track upon which it is to run has been cleared of opposing trains.

When it is desired to move a train against the current of traffic over working limits of a work extra, the work extra must be instructed to be clear of the track affected as prescribed by Example (7) of Form H.