newsletter

April 1970 ■ 50c

newsletter

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Robert D. McMann, Editor.

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The Cover

TTC PCC's 4199 & 4226 are captured on the Queensway at Howard Road at 3:00 a.m. in the morning on the UCRS night trip to mark the abandonment of the Bloor and Danforth shuttle carlines, and part of the Dundas carline, on May 11, 1968. This view by John D. Thompson is a fine example of a straight time exposure.

Coming Events

Regular meetings of the Society are held on the third Friday of each month (except July and August) at 589 Mt. Pleasant Road, Toronto, Ontario. 8.00 p.m.

May 15: (Fri.) Regular meeting. To be announced.

May 29: (Fri.) Hamilton Chapter meeting, 8:00 p.m. in the CN Station Board Room, James St. N., Hamilton.

May 30: (Sat.) See below.

June 19: (Fri.) Regular meeting. To be announced.

June 26: (Fri.) Hamilton Chapter meeting, 8:00 p.m. in the CN Station Board Room, James St. N., Hamilton.

ATTENTION RDC FANS! SPECIAL UCRS RDC TRIP! Saturday, May 30, 1970 A special trip over predominantly freight-only trackage of CN inthe Toronto region. From Union Station, via the Oakville Sub to Burlington, then over the Halton Sub to Georgetown, Brampton, and over the York Sub to Toronto Yard. From Toronto Yard east to Pickering, then westerly over the Kingston Sub to Union Station. Runpasts planned. Equipment: one RDC-2 and one RDC-1 (hopefully the 6110). Capacity limited to 150, no children. Trip leave Union Station at 10:00 a.m.

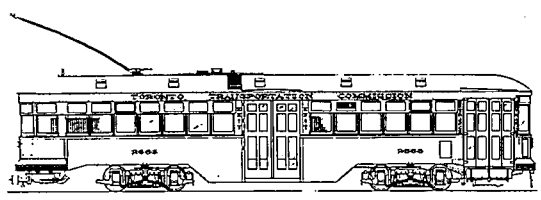
See the special flyer on this trip with this issue of the NL for more details, the fare, and convenient coupon to order tickets.

A note of thanks to UCRS member (164) Blake A. Tuck of Oakville for the $50.00 donation to the Society from the proceeds of material from Mr. Blake's collection sold at the Society's Auction March 20.

Readers' Exchange

LOCOMOTIVE FOR SALE: Tenshodo HO NYC Hudson, painted and lettered as TH&B 502. Test run only. $50.00. J. A. Brown, 3 Bromley Cres., Bramalea, Ont.

WANTED: Original Kodachrome slides of ONR, AC, CN Tempo, GO diesels SD&P cars all lines, scenic shots of name passenger trains. Buy or trade. Gerry Burridge, Box 152, Pte. Claire, Dorval 700, Quebec.



Ontario Electric Railway Historical Association announces days on which the Halton County Radial Railway trolley museum at Rockwood will be open to visitors.
Sundays — from April 12th to late October, 1:00 p.m. to 5:00 p.m.
Saturdays — June, July, August, and September only, same time as for Sundays.

RAILWAY NEWS AND COMMENT

1970 EARNINGS OUTLOOK FOR CANADIAN RAILWAYS

While most of the factors at work in 1969 to inhibit the profit performance of Canada's two major railways will be present this year on the same or an expanded scale, a net improvement in 1970 earnings is still possible. This is because of higher freight rates now in effect, increase bulk commodity export movements in Western Canada, higher container and piggyback traffic levels in Eastern Canada and expected gains in the productivity of plant and rolling stock. While any improvement in railway earnings from the depressed levels of 1969 will be welcome to management and shareholders, the 1970 gain will probably not be sufficient to restore profits to the proportions of 1968 and earlier years.

Because of rapidly increasing personnel and materials costs, declining federal subsidy payments and strikes in many important client-industries, last year was a very difficult one for CP Rail and Canadian National Railways, both of which are based in Montreal.

Despite record incomr from railway operations in general and carload freight operations in particular, CP Rail had net railway earnings of $34.6 million--the lowest level since 1962, and well below the $41.3 million recorded in 1968. The 1969 railway earnings represented only 5.97% of revenue--the lowest ratio since 1962 and down substantially from 7.3% a year earlier. The $34.6 million is the operating profit derived from railway operations, which include carload freight services, express, passenger services, mail traffic and federal railway subsidies. It excludes hotel, steamship and telecommunications profits and the results of subsidiary companies in trucking and air transportation. It is before fixed charges, before dividends received from Canadian Pacific Investments, Ltd., and before dividends paid to shareholders.

While results of CN's 1969 operations are not yet available, indications are its net railway operating profit was about the same as the $18.7 million recorded in 1968.

The outlook for both companies in 1970 is for a more than 5% increase in carload freight revenues and a somewhat higher level of operating profit than in 1969. However, this projection could soon lose all validity, if a strike by railway employees materializes later this year, if prolonged strikes occur in major client-industries, or if the domestic economy--in response to official anti-inflation efforts--loses more steam than is currently anticipated.

A spokesman for CP Rail says the company's railway revenues were higher last year because carload freight rate increases made during 1968 were in effect throughout 1969, and because additional adjustments in rates were made at invervals over the past 12 to 14 months. Another contributing factor to the higher revenue levels of 1969 was significant increases in the volume of potash, liquid petroleum gases, wood pulp, newsprint, vehicle parts, trucks, pool car traffic and piggyback freight. These gains were partly offset by declines in the volume of steel products, mine products, and grain. The last was off in volume because of labour troubles in West Coast ports and declining export sales. The fall-off in steel and mine product traffic was caused by prolonged strikes affecting several major producers.

Again last year CP Rail experienced a substantial reduction in subsidy payments received from the federal Government. These payments totalled about $38.7 million during 1968, and, in accordance with the National Transportation Act, were reduced to about $33 million last year. But the major reason why CP Rail's 3.1%, or $17.7 million increase in gross revenue to $580 million did not improve 1969 operating profit was rapidly rising labour and materials costs. Its railway operating expenses increased about 4.7%, or $24.3 million, to $545.4 million last year. Most of the increase resulted from labour agreements signed in late 1968 and early 1969, which come up for renewal during and at the end of this year.

The CP official says the expected improvement in 1970 profit largely will come from the introduction of high volume unit trains this year for the movement of coal from the interior of British Columbia to the West Coast. A substantial increase in grain shipments is also expected as a result of the USSR's pledge to take remaining grains deliverable under its agreement with Canada. Potash traffic is also expected to show still further gains in volume this year.

While these various commodities will help carload freight revenue, so will the carload rate increases that took effect March 1. Higher tariffs on all less-than-carload traffic (now entirely classified as express) introduced in mid-January-1970, will improve this aspect of the company's operations.

Passenger train service revenues will likely show a decline, as will subsidy payments from the federal Government. Should decisions be forthcoming during the course of the year on the railways' pending applications to abandon or receive federal support for uneconomic passenger services and branch lines this progressive reduction in subventions might be arrested. The size of such annual payments for which CP Rail might qualify is still indefinite, but they are payable retroactive to a date 90 days after the first filing of the applications with the Canadian Transport Commission. For the most part the passenger train applications were filed in late 1969.

Hand in hand with these changes in the company's several revenue sources this year will be a substantial jump in labour costs, as the final wage and benefit increases built into the current contracts take effect or as new contracts are negotiated during the year. Partly offsetting these higher labour costs is an expected jump in internal productivity as recently improved sorting and switching yards enter year-round operation, as equipment is more fully utilized, and as customer service centres cut down on unit overhead costs in many areas.

The CP Rail official says capital expenditures probably will not be quite as high this year as last, and those that are made will be largely financed through internally generated funds. In 1969 the railway-related capital spending of the company was about $100 million. This was about 33% higher than in 1968. A good part of the 1969 expenditures went for new coal train equipment to be placed in service this year. The growing economic uncertainties and high costs of public financing last year had little effect on the company's capital investment programs, with most spending proceeding as originally planned.

CN's 1969 operating profit remained unchanged despite a 6%, or $43.6 million increase in carload freight service revenue to a record $769.9 million and a 16%, or $10 million increase in express revenue to about $73 million. Passenger train revenue was largely unchanged at the 1968 level of $70.6 million.

CN's subsidy payments from the federal Government declined more than 12% last year, in accordance with the provisions of the 1967 National Transportation Act. These payments in 1968 totalled $55.1 million, down 12.7% from their 1967 level. But the main reason for the decline in CN's operating profit last year was the substantial 5%, or $47.1 million increase in its operating expenses to an estimated $990.2 million. The major increase was in personnel and materials costs.

While CN refuses--until its 1969 annual report is released by the Minister of Transport--to discuss in any more depth its latest financial results and what it anticipates on this score in 1970, the basic factors identifiable with respect to CP Rail will also be at work on CN in 1970. These include on the revenue side: increased coal and other bulk commodity export movements in Western Canada; higher piggyback and overseas container traffic levels in Eastern Canada; higher average carload and express revenues due to the higher tariffs now in effect which were not in effect for all of 1969; and, further selective adjustments in tariffs over the balance of 1970. The company can also expect further reductions in federal subsidy payments unless applications for relief from uneconomic services that must be maintained in the public interest are expedited.

On the cost side, the factors at work affecting CN's 1970 financial performance include substantial additional labour expenditures--estimated by CN at upwards of $30 million for its railway personnel --partly offset by improvements in the productivity of rolling stock, switching yards, and freight and express terminals. The net effect of these various factors should be a moderate improvement in CN's 1970 operating profit from railway operations --that is, before income from non-railway sources and before net interest payments on its funded debt.

Capital expenditures will likely remain at high levels as emphasis continues on acquiring bulk commodity equipment for employment in unit-train operations, and as more new diesel locomotives are acquired and the general upgrading of its rolling stock continues.

For both transcontinental railways piggyback and overseas export-import container traffic has high growth potential. CP Rail expects a 5% increase in loaded revenue-producing trailer volume in 1970 over 1969, and its piggyback people are working to improve international trailer volume with the United States. CN is expecting a 7% gain in loaded revenue-producing piggyback handling this year.

Each will continue to cultivate overseas container traffic to and from Canada's eastern ports and Ontario, Manitoba, the Western provinces and the U.S. Midwest. To a large extent, traffic they manage to haul in this service represent new business since much of it would otherwise move by ship directly into the Seaway ports along the Great Lakes, and from there by truck to inland destinations. The container shipping services that have been established in Eastern Canada should be moving into high gear this year providing there is no fall-off in Canada's overseas foreign trade. The increase in container volume generated by these shipping services plus others expected to start up during 1970, should make for a high volume of overland container traffic for both CN and CP Rail.

Both companies this year will continue the implementation of computer-oriented car tracing and control systems, and will expand their automated track signalling systems across the country. New electronic hump yards are in operation at strategic centres in most geographic regions, and others in Western Canada--where traffic is expected to show the greatest future growth--will be developed this year and should be fully operational in 1971.

One of the top priority concerns of management in both transcontinental systems this year is the question of federal financial support for uneconomic branch lines and passenger services which must be maintained in the public interest. The uniform formula by which the railways are to calculate their costs in determining whether such services are uneconomic was handed down by the Canadian Transport Commission last fall. It is being contested in the courts by CP Rail.

Meanwhile, public hearings on some of the passenger service abandonment or financial support applications that have been pending for some time have now begun.

The other high priority concern of railway management this year is undoubtedly labour negotiations. Indications are that both management and labour are digging in their heels in support of hard-line positions. In this context, Labour Minister Bryce Mackasey's new advance mediation program will likely put to a thorough test throughout the balance of 1970. The first of the contracts up for renewal expired March 15 and the last expires December 31.

CP RAIL BI-LEVEL COMMUTER EQUIPMENT TO START SERVICE

The new CP Rail double-deck commuter equipment will go into service on the Lakeshore run out of Motreal on Monday, April 27th. The introduction of the gallery-type suburban cars--unique in Canada--coincides with the change to daylight saving time when new commuter schedules come into effect.

A single train of nine cars, costing $2.8 million, will make four daily runs Monday through Friday. Passengers will ride in air-conditioned comfort morning and evening. The new cars, of stainless steel, are designed for high-density commuter traffic and combine increased seating capacity with maximum utility and comfort. The seven trailer cars each carry 168 people and the two control cars 156 each, or an aggregate of 1488 passengers. Commuter cars now in use have a seating capacity of 103.

The new cars were built by Canadian Vickers Limited. Rapid loading and unloading of the new cars is facilitated by wide sliding doors installed at each side at the centre of the car. Spiral stairways lead to the upper gallery. The control cars will contain toilets.

RAIL UNIONS LAUNCH NATIONAL CAMPAIGN TO BLOCK PASSENGER ABANDONMENTS

Canada's railway unions, representing 100,000 employees, have launched a national campaign in an effort to block abandonment of passenger service by CP Rail and Canadian National. A memorandum has been circulated by the Canadian Railway Labour Association to its 16 affiliated unions recommending that they advise their locals to form joint action committees in communities where hearings on applications for abandonment are being held by the Canadian Transport Commission.

CP Rail and CN have submitted 31 applications for discontinuance of inter-city and regional passenger services in various parts of the country.

The United Transportation Union in a presentation to the Committee on Transport and Communications of the House of Commons stated that there is still a tremendous amount of research to be done before anyone can say with any degree what the future for rail transportation is. It was pure folly, the union said, for the Transport Commission to proceed with the consideration of the abandonment of a substantial part of Canada's passenger train services until all studies have been carried out. Both the UTU and the CRLA are asking that in addition to the local and regional hearings being held by the commission that a central hearing be held in Ottawa so that the overall problem could be considered.

RAILWAY FREIGHT RATE CHANGES NOT ALL INCREASES

Shippers of manufactured goods, mineral, agricultural and forest products can expect plenty of action in freight rate changes from Canadian railways in 1970, but not all of it will involve increases. While the pressure for higher freight rates characteristic of the past 12 to 18 months is still present in the form of sharply declining federal subsidy payments, and rapidly rising labour costs, the moral suasion exercised by the Federal Government and the Prices and Incomes Commission will probably preclude any further general freight rate increase over the balance of this year.

Hard-pressed shippers can only regard this as mild, and somewhat belated, relief after the series of unprecedented railway freight rate increases since the National Transportation Act took effect in 1967. While further increases are unlikely over the balance of this year, there is every indication CP Rail and Canadian National still will take advantage of the other rate-setting freedoms granted them under the NTA.

Shippers can expect selective increases or decreases to meet what the railways consider competitive, geographical or developmental needs of particular industries or areas. Increasingly, the railways will put forward proposals for lower as well as higher rates, depending on the tonnages that can be guaranteed them, the equipment needed to service the traffic, and the degree of equipment utilization, sorting and switching involved.

In large organizations such as Canada's transcontinental railways, philosophy and attitudes change slowly. However, it has now been three years since the Federal Government enacted the NTA, which ended formal railway freight rate regulation, and in its stead laid the groundwork for market forces to determine rate levels. CP Rail and CN rate officers have increasingly adopted an experimental approach to rate-setting in an effort through rate-reduction incentives to achieve greater car loadings and greater equipment use, establish year-round traffic patterns and even out the month-to-month flow of other products. All this is being done with a view to gaining increased efficiencies and productivity from personnel and plant.

The less-than-carload traffic (now uniformly referred to as express freight) has also borne its share of rate increases in the past few years. A new cost-oriented tariff structure was adopted in the fall of 1967 providing for transport charges based on the cubic space occupied by the shipment and the shipping distance. This was a major departure from the traditional railway policy of pricing its transport services according to distance and the nature of the merchandise, with more valuable goods generally bearing a proportionately higher freight rate than lower-valued goods. A general increase--average about 8%, but in cases considerably greater than that--was applied to most of these rates in mid-January. While further general adjustments are unlikely over the balance of 1970, individual rate changes to meet specific shipper requirements or competition are probable.

Thus, while the official damper has been placed on general freight rate increases, it may not prove such an onerous burden for the railways. The call for price restraint was issued last month after the general increase in express rates and a March 1 general increase in carload freight rates affecting a full 33% of all revenue freight traffic moved by Canadian railways. These higher rates will have a corresponding beneficial effect on the railway's revenues and earnings this year. They no doubt were set with a view to the increased costs expected. This fact, plus the continuing ability of the railways to make selective increases--such as CN's recent 7% average increase on about 50% of its carload traffic moving to, from or within the Atlantic Provinces--leave the railways with a good deal of leverage to offset the decline in subsidy payments and the continuing increase in their labour costs.

THE WORDS TO 'CN IN ACTION, BUILDING THE CANADIAN DREAM'

In response to a request recently, the "Action Line" column in the Toronto Telegram published the lyrics to the popular television commercials of Canadian National:

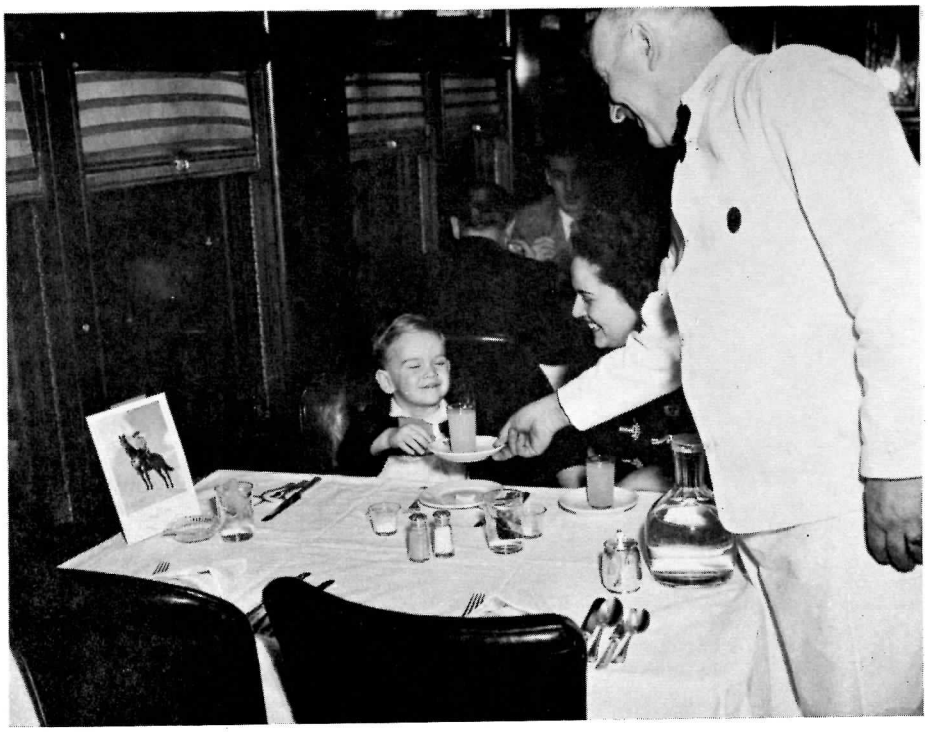
"There's a special thing in the north spring
On the lofty peaks where the white snows gleam
Or in the quiet reeds as the lone bird feeds,
and the rolling wheels of the Canadian dream.
You can hear the hum in the summer sun
When the big ones bite and the long ship steams.
In the crowded hours or a burst of flowers,
There's a firm belief in the Canadian dream.
You can hear the call in the haunted fall
On a lonely beach where the warm sands gleam
In the traffic's roar as the wild geese soar,
And the big train moves through the Canadian dream.
With cold days here on the far frontier
As the big deep snows show us winter's scheme
We can share the goals of the 20 million souls
In the search we call The Canadian Dream."

"... so when the farmer's daughter came to the door, the travelling salesman said ... "

"Getting There was Half the Fun!"

A PORTFOLIO OF THE GOLDEN AGE OF RAILROADING FROM THE COLLECTION OF OMER LAVALLEE.

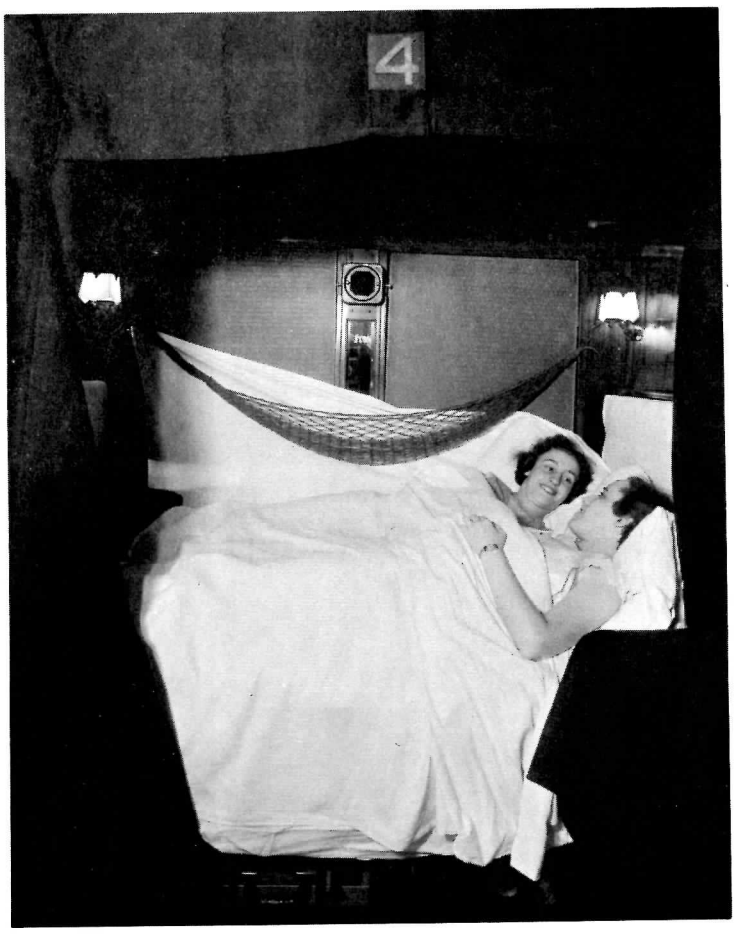
" I'm sorry, lady, but apparently you forgot to pay your bill in the dining car."



"....the Metrec Certainly

"Thank you! And do be generous we caviar

"Don't let this hick suit fool ctually,

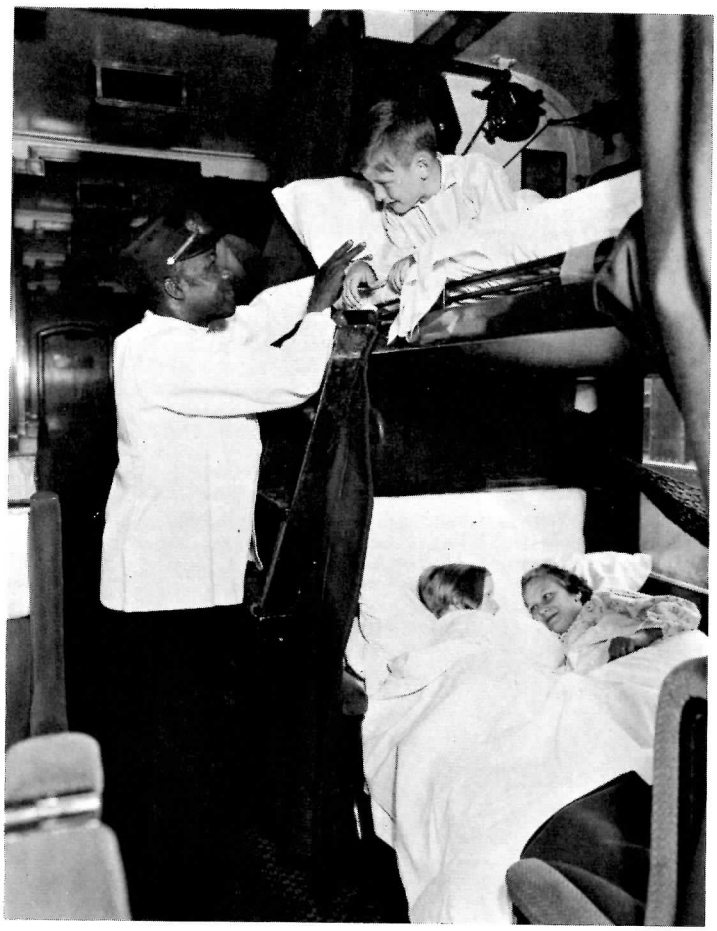


"Aren't these lower berths nice and roomy?"

cal' Certainly sir. Right down here....."

ith ...iar when you fix up my Pablum."

ou...ally, I'm a writer for Playboy."



"...and if you're <u>really</u> lucky, the safety catch will come undone and the upper berth will close up with you in it."

WORTH NOTING...

* CN's CTC extension on the Dundas sub, recently placed in service between Hamilton West and Copetown West, was put out of commission for several days in mid-March when vandals destroyed much of the wiring in a wayside signal cabinet. CTC should be extended from Copetown West to Brantford in April.

* CN recently called for development proposals for its station property at Prince Albert, Saskatchewan.

* The Ontario Department of Highways will subsidize a study on the merging of the CN and CP Rail railway lines in London, Ontario, to the extent of 75%. Estimated cost of the study is $100,000. The City of London will retain a consultant to start on the study, which will seek ways in which CP Rail (north section of the city) could use CN lines.

* An item proposed in the capital budget of the City of Barrie, Ontario, for this year is a railway sput to serve the growing Bayview Industrial Park. Estimated cost is $50,000.

* New York State legislature recently approved construction of a six-mile monorail in Niagara Falls, New York. Niagara Monorail will build the structure and the facility will become operable in approximately 36 months. Regular daily service will be provided on a route concurrent to the Penn Central Railway right-of-way to Front Street.

* GO Transit proposals for a GO Transit bus station in the Town of Ajax, Ontario recently met objections from the town council as to location. A study of site location was called for by the council.

EQUIPMENT NOTES...

CN MOTIVE POWER NOTES

* GF-30h SD-40 locomotives continue to arrive from General Motors Diesel Limited: 5149 -- March 31/70
5150 -- March 31/70

* Motive power transfers:
- 5031-34 (GF-30) to Toronto Yard from Calder (Edmonton),
- 4101-4107 (GR-17) to Spadina from Symington,
- 4126-4128, 4130-4133 to Symington from Spadina,
- GTW 9001-9004 (F-3's) returned to Battle Creek, Michigan from CN Fort Erie.

* CN 4-6-4F, No. 46, formerly owned by H. J. O'Connell of Dorval, Quebec, has been acquired by Canadian Steel Ltd., of Longueuil, and is now on display at their industrial park.

* CN 44-tonner #6 has been sold to Indusmin Ltd., apparently for use at their distribution point at Pinecrest, near CN Toronto Yard.

CP RAIL MOTIVE POWER NOTES

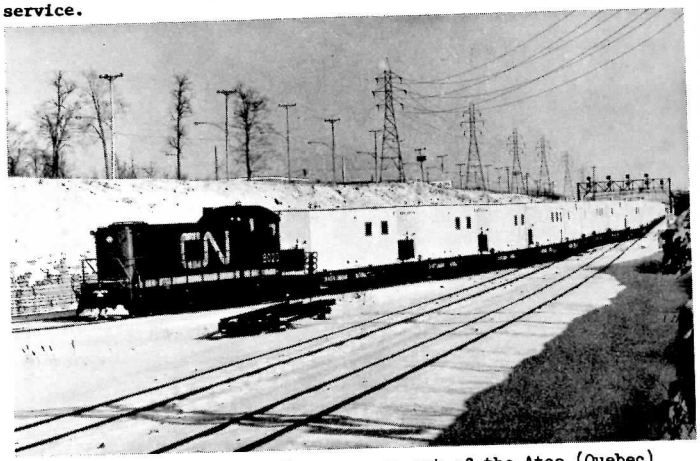
* The following leased units were returned to their owners as of April 10th: 6 CGW B units
4 CGW A units
5 B&LE 880's

CP RAIL EQUIPMENT NOTES

* North American Car (Canada) Ltd. has entered into a long-term lease for 400 new covered hoppers with CP Rail. The 100-ton 4427 cu.-ft.-capacity cars will be used primarily for potash and grain.

HOME ON THE RAILS

* Modern housing is being provided Canadian National's work gangs who maintain the railway's passenger and freight equipment. Portable units mounted on railway flatcars or removed and established as wayside stations, are self sufficient with electric lights and heating, modern kitchen and eating facilities, showers and other plumbing requirements, a recreation area, and accomodation in separate rooms, two men to a room. A set of four units will accomodate a 12-man gang. CN currently has 450 of the units in service.



Portable houses for road gangs move out of the Atco (Quebec) factory at Montreal. CN will have 450 of the units in service by May 1.

-- Canadian National.

WHY DO THEY GO BY TRAIN?

Who is 'Mr. Average Railway Passenger'? Railways have a general idea who he was--but if they still don't know very much about him. The person who can best tell the railways about what the passenger needs, wants and expects is the passenger himself. And that is exactly to whom CN is going right now in one of the most significant survey programs ever conducted by the passenger sales and services department.

The survey, started in the last quarter of 1969, is being conducted right where the passenger is--aboard the train. Passengers, selected at random, are asked to fill in a 15-page, 53-question questionnaire containing questions relating to trip purpose, trip planning, reasons for using the train, date about the traveller and satisfaction with literally all aspects of CN service encountered. While the survey may appear to be rather lengthy, experience has proven that it is easily understood and can be completed within 15 minutes. Bob Evans, manager of CN passenger marketing research, states that the response of customers to the survey has been enthusiastic, as evidenced by the inclination of many to write in additional unsolicited observations. There have been some complaints, says Mr. Evans, but many of the supplimentary comments are in the nature of plaudits or serious suggestions on how CN can attract new business. The complaints are sent to the appropriate officers for immediate action.

Some 1500 passengers were surveyed in the initial phase of the survey last year. In the second phase of the program, now in progress, 3000 passengers are being invited to fill in the questionnaire. The survey is being conducted system-wide. Train services covered include runs between Montreal and Halifax, Sydney, Gaspe; Montreal-Quebec; Montreal-Ottawa; the Montreal-Toronto Rapidos; Montreal/Ottawa-Toronto locals; the Tempo trains in Southwestern Ontario; and the transcontinental Super Continental.

Mr. Evans says surveys of each service will be repeated quarterly with a particular view to relating 'who's' and 'why's' to the trends indicated in earnings and traffic volume statistics. It is hoped that the continuing survey will give CN passenger sales and services the most comprehensive reading ever of the CN passenger--who he is; why he is using CN; what he likes; what he dislikes about the service. Surveys conducted in the past have, for the most part, told the Company who much is being bought at which outlets for travel between which points. "But these surveys," says Mr. Evans, "have not offered any insight into who is buying, for what reasons, and with what degree of satisfaction. For this sort of information--and it is this information which is basic to equating our service to the marked needs--we must as the customer."

Tabulation of the questionnaire is being handled by computer and the first group of 1500 will soon be going to the CN computer centre for processing. The results will receive full distribution in the passenger department.

NIGHT PHOTOGRAPHY

by Dick George. Additional information by Bob McMann.

As spring comes to the land, and as the warmer weather enables one to move about outdoors without too much hardship, and as daylight becomes more plentiful in the evenings, rail photographers take hope and plan photographic safaris to photograph their favourite subjects. A more ambitious breed of photographers view the lengthening daylight hours and the twilight as a time in which to experiment with night photography. They check out their flash equipment, stock up with flash bulbs, and take full advantage of the mysticism of railroading after dark. The opportunities are infinite and the results can be quite spectacular.

There are basically three approaches to night photography; time exposures, open flash (time exposures with flash fill-in to supplyment available light) and synchronized flash exposure.

By far the easiest technique is the time exposure. A sturdy tripod is the only extra equipment needed although the use of a cable release will lessen the chance of bumping the camera as the shutter is opened or closed. Exposure time is always debatable, but where there is plenty of light available a good exposure meter (preferably one of the CdS type with a good lower range scale) may give some indication. Experiment with two or three exposures--one at 50% more time, and one at 50% less time than the first one. This will soon reduce your margin of error. Making notes of the times and light conditions will also serve as future reference.

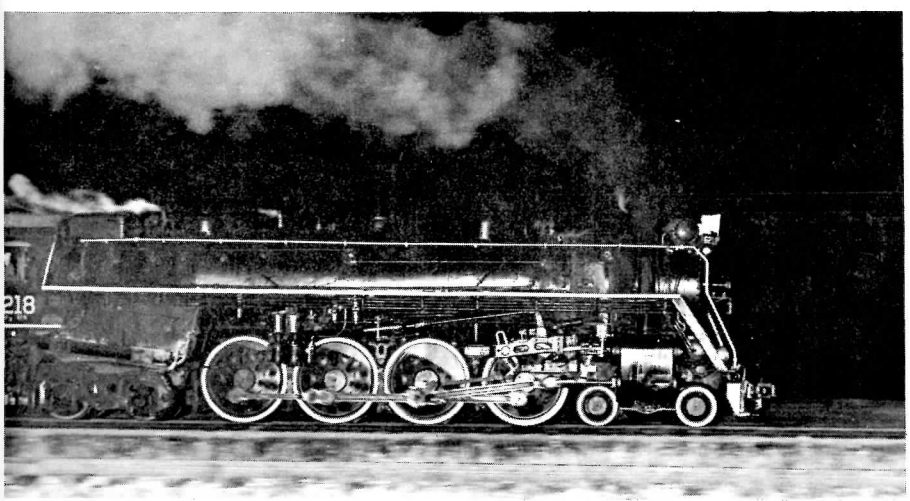
Although time exposure is the easiest, the results are also the most limited of the three techniques for several reasons. The subject must be adequately lit by available light and this is not always possible. Steam blurs into a shapeless mass and headlights or other light sources actually in the picture frequently develop unusual ring patterns of interest to the physicist but of little value to the railfan. At the same time these light spots burn themselves into the film emulsion and produce a negative that is very difficult to print. Use a fairly fast film (EI - 400 to 800). This will shorten the exposure time required but don't go too far or every little light will appear as a massive white blob, blanking out detail if the exposure is more than a second or two.

The second approach is to open the shutter as in a time exposure, but to depend on one or more manually fired flash bulbs (or electronic flash units) to provide the light. This will allow you to photograph the subject if there happens to be no available light to illuminate it. Most flash bulbs have a light duration of about 1/50th of a second and this will stop steam motion in some meaningful form. The even shorter duration of a strobe light is just that much better. If one works quickly with this method, several bulbs may be fired, lighting up large areas and giving a multi-flash effect that would require several flash guns, stands, and complicated wiring for a similar synchronized exposure. Here much the same results may be achieved with a minimum of equipment. The lighting may be selective on only certain parts of the subject matter, or directional to overcome shadows or fill in dark areas. Decide what regions of the picture you want illuminated and then go to it.

Again the exposure will require some experimenting but on a medium speed film (EI - 125) four or five #5 bulbs will give you good coverage of a subject fifty feet away such as a single unit on a shop track. There are some advantages to using larger bulbs such as #11's or #22's whose light outputs are twice and nearly four times that of a #5 bulb respectively, but remember that they have a bigger base and require a larger flash gun (and are more expensive and not always easily obtainable). This will give you the same amount of light with fewer flashes, saving time and lessening the chance of movement in either the subject or the camera. Since the shutter is not open as long, the steam patterns will not be as distorted. Their light also carries further and will pick up more detail. Do not use too fast a film, or light sources in the picture will appear too intense and unnatural. In time exposures a fast film is useful for shortening the exposure but here you are providing the light with the flash bulbs. It is also unwise to fire the bulbs from within the area of the picture as the light source will be the brightest spot and tend to dominate the entire composition. Also, standing too close will concentrate the light in a "hot spot' and not cover the entire area. Unless this effect is desired, back up and spread the light evenly over the entire subject. One further advantage of this method is that any number of cameras can be set up for each picture. Take along your friends, share the cost of the bulbs, and have a good time.

Synchronization of the flash and shutter, the last technique, is of course the only alternative for moving objects; but it involves more equipment and time to set up. If only one flash gun is used and the subject to be illuminated is anything more than a small scene, large bulbs such as #11's or #22's are a must. A small extension cord will allow you to hold the flash gun a short distance away from the camera and vary the light direction slightly from the point of view. This will give the subject a little more form. On-camera flash tends to produce very 'flat' lighting and seems to merge the subject with the background. Generally two or more flash guns on either side of the camera are a far better arrangement to provide the necessary light and give a good overall illumination.

For synchronization of higher shutter speeds with flash, equipment must be good and checked frequently. Remember that focal-plane shutters require bulbs with a longer flash duration--plateau flash outputs rather than the more common peak variety. Also with strobe flash units most common focal-plane shutters will not sync at speeds greater than 1/60th. One way to overcome the problem of synchronization and high shutter speeds, but at the same time capture high speed action, is to pan the moving subject. Most of these pictures require a shutter speed of between 1/50th and 1/100th and here synchronization is fairly reliable. Just stand back 100 feet from the tracks, pan the subject and fire away. Two #22 bulbs on a fast film will give you enough light and the resulting picture will be a real conversation piece. It has been done (see picture of this action elsewhere in the piece), but a little practice and a few horseshoes or four-leaf clovers are necessary.



6218 at speed! A beautiful pan shot taken by synced flash. Exposure: 1/60 f/8 on Tri-X pan film. Flash: two #22 bulbs, about 50 feet apart, set about 80 feet from the track.

-- James A. Brown.

Many of the points relating to night photography for black and white film also relate to colour film. However with colour film, there are a number of other important considerations one has to deal with, which black and white photographers in large measure do not have to worry about.

One of the chief considerations in colour photography at night is the correct colour temperature. Colour films are divided into two broad categories according to colour temperature. Daylight films are made and balanced for illumination of approximately 6000°K. The other category of colour films are those which are balanced for artificial light (3200-3400°K). In doing night photography (specifically time exposure work), one must be aware of the colour temperature of the available illumination on the scene. Here presented is a listing of common light sources and their colour temperatures:

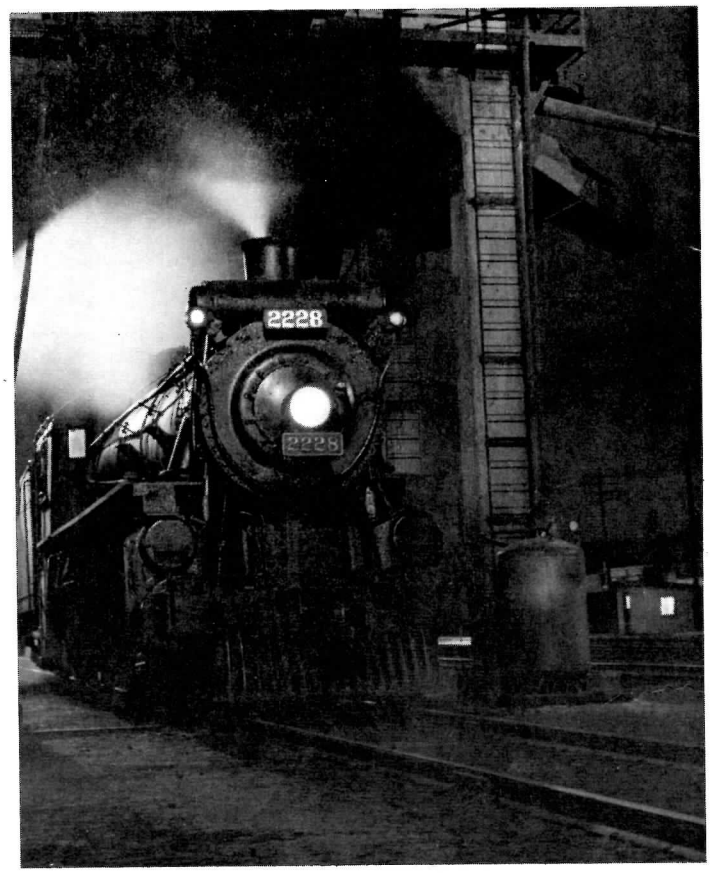
candle flame	1500 (°K)
incandescent house lamps	2500-3000
100 watt tungsten lamp	2865
500 watt tungsten lamp	2950
500 watt projection lamp	3175
3200°K floodlamp	3200
zirconium concentrated arc	3200
SM flashbulb	3300
SF flashbulb	3400
white #1,2,4 floods, reflector	3400
25C flashbulb	3400
warm, white fluorescents	3500
cool, white fluorescents	4500
blue floodlamp	4800
M2B flashbulb	5100
mean noon sunlight	5400
direct sunlight in summer	6000
blue flashbulb	6000
daylight fluorescents	6500
sunlight + light from clear sky at noon	6500
light from overcast sky	6800-7000

This view of 6218 sticking her nose out of the roundhouse at Spadina, is an excellent example of synchronized flash with camera. With the appropriate shutter speed for the situation, the photographer has managed to record the lightly falling snow.

-- Tom Kelcec.

Canadian Pacific 4-6-2 2228 is recorded for posterity under the coaling tower at Lambton. This is a straight time shot; note the coal shute blowing in the wind, and the fuzzy smoke effect.

-- James A. Brown.



In time exposure work, one must try to balance the colour film to the light source(s). Often this may prove to be impossible (especially with fluorescent illumination). Remember that daylight films exposed under artificial (3200-3400°K) illumination will render the scene with a reddish tone. Similarly artificial films used under illumination approaching daylight quality will be predominantly blue.

There are two types of artificial light films available for photographic use:
* type B films balanced for 3200°K illumination;
* type A films balanced for 3400°K illumination (only one--Kodachrome II Type A Professional (35 mm)).

Artificial light films may be converted for use with daylight colour sources of light; type B films require an 85B filter; type A film requires an 85A filter.

Daylight colour films may be filtered for use with light sources approaching 3200-3400°K colour temperature--however, there is such a loss of film speed that it is rather impractical to do. For type B illumination use an 80B filter; for type A illumination use an 80A filter.

Flash can be used with colour films as easily as with black and white. Remember to use blue bulbs with daylight emulsions. Electronic flash is balanced for daylight film.

One bugaboo not generally mentioned about long time exposures on colour film is the problem of reciprocity failure. Expressed simply, this means that with long time exposures (greater than one second) more exposure must be given--as an example, for Kodachrome II--1 second -- + 2/3 stop
10 seconds -- + 1-1/3 stops
100 seconds -- + 2-1/3 stops.
The amount of exposure will vary with the colour film used. Some filtration to restore colour balance is necessary, but most people do not worry about it.

Lastly, here are a few do's and don't's:

* Don't make a nuisance of yourself on railway property and throw discarded bulbs and film boxes where they will endanger others.

* Don't burn or cut yourself on a freshly fired bulb. Particularly the larger ones get very hot and this weakens the glass. Sometimes they break in your hand.

* Don't set your camera too close to an idling diesel. The ground vibrates. It is very slight but it will blur your negative.

* Don't start taking pictures at stations where trains stop briefly and you will be short of time. Take your time and plan what you are doing. Flash bulbs are expensive.

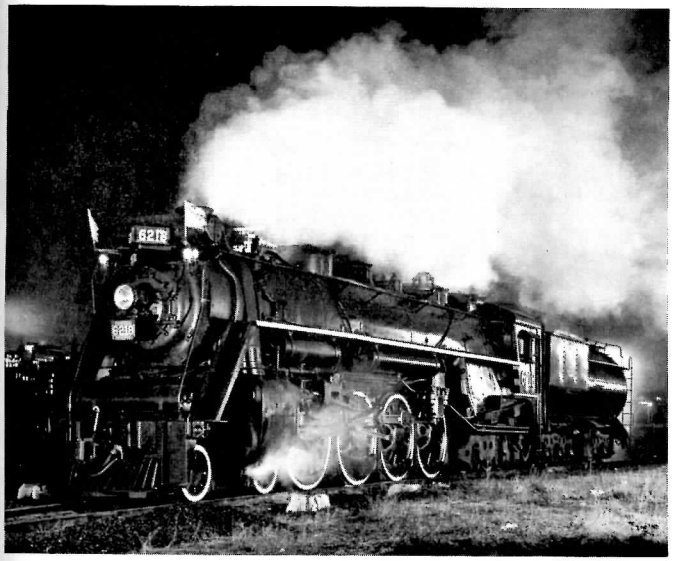
* Do keep your equipment clean and the reflectors polished for maximum efficiency. Check your batteries frequently. If you do your own printing, a little sodium carbonate added to the developer will improve the black tones of the paper and give a greater contrast between the sky and the subject.

* Do try some photography on a wet evening just after a rain when everything reflects light and sparkles.

* Do experiment with selective lighting, new angles and special effects. Even if no one else knows what the picture is of, you will because you wrote it down when you kept track of the exposure. Remember???

It is the hope that perhaps you will take some inspiration from this article and go out and try your hand at night photography--black and white and/or colour. Good luck and happy picture-hunting!!

This scene of stalled TTC streetcars on McCaul Street is a straight time exposure; the even illumination from the lights on the street and the surrounding buildings. Snow falling at the time the exposure was made diffused the light.
-- Ted Wickson.



This view of 6218 at Spadina Yard, the night before the UCRS Winter trip in January 1969, is an example of time + fill-in flash---two bulbs on the side, and one on the front.
-- Tom Kelcec.

This pair of RDC's at Palmerston station is another fine example of a straight time exposure. Note the slight fill-in effect on the near side of the RDC, caused by the reflection of light from the snow on the bank.
-- James A. Brown.

ALBERTA GOVERNMENT PROPOSES LEGISLATION PROMOTING URBAN TRANSPORT

Legislation designed to promote integrated urban transportation systems, protect property rights in transport corridors and curb land speculation was recently revealed in the Alberta Legislature. First reading was given to Highways and Transport Minister Gordon Taylor's act regarding transportation systems in cities. The act was described by the minister as unique in North America.

The bill is designed to: prepare comprehensive transportation systems with agreement between cities and the province for cost-sharing; create transportation protection areas set aside for rapid transit, freeway, expressway or other transportation facilities with protection included for residents of the area affected. The bill also contains clauses for provision for control of access, parking and adjacent development along the transportation corridors, and includes the authority for a cabinet minister to enter into transportation agreements with Alberta cities and establish regulations regarding establishment of the systems.

Mr. Taylor also said that the province is reviewing its five-year plan for contributions to urban transportation. He suggested that the new five-year plan of provincial support for transportation in Calgary and Edmonton will contain more funds.

According to the bill, each city establishes and maintains all transportation facilities under its control, direction and management. But each may qualify for provincial assistance by complying with the legislation. Each city starts by preparing a transportation study report integrating various transportation facilities required to meet present and future requirements. After the transportation study is converted to bylaw form, the bylaw is passed onto the provincial cabinet for approval.

When a transportation facility included in the city system is approved by city council, the city may then enter into a cost-sharing agreement with the province. The province has tentatively set a January 1, 1971 deadline for implementation of the transportation bylaw.

"PACESETTER" DEVICE ENSURES THAT FAST TRAINS GO SLOW

Most railroaders are out for high speed performance. During February the Mountain Region of Canadian National went into partial reverse. A slow-speed device was installed on 20 diesel units that will be used to haul coal trains between Luscar, Alberta and the Pacific Coast. Called the "Pacesetter", its job is to maintain low speeds automatically and precisely. The machine was called into service because of the loading requirements at the mine tipple. The dumping machinery there is programmed to load 100 tons of coal into each car. Since the load has to be spread evenly the car must move forward during dumping. If the engine speed can be held constant there is no problem. The trick is to synchronize the train's pace with the rate of delivery.

This is the job of the Pacesetter. It regulates the locomotive's generator output by means of a black box device that compares train speed with desired speed. Circuit boards in the box 'instruct' the voltage regulator to maintain whatever speed the engineer has dialled up on the speed range selector mounted over top of his controls.

The way the black box picks up a speed indication is ingenious. Inside a housing fitted to the end of the locomotive wheel axle is a gear whose teeth pass through a magnetic field. The passage of each tooth through the field creates a pulse which is fed into the control box. Here the pulses not only control power output but are also converted into figures on the speed indicator in front of the engineer. If the locomotive wheels are turned down, the teeth will revolve more quickly and give a faulty indication. There is a dial incorporated into the Pacesetter which will compensate for changed wheel diameter. The Pacesetter is circuited to maintain uniform speed as low as 2/10 mph even though train weight will change with each car loaded.

Equipment superintendent W. Studnik, whose Calder motive power staff installed the Pacesetters is watching the performance of the device with considerable interest. "Once the loading equipment at the mine is 'debugged' and in full operation we should realize some good equipment economies," he says. "By loading on the move we cut down on wear to the rotary couplers, the car bodies and the braking components. What we're after is longer life and reduced maintenance. We will be moving coal by the trainload for many years to come and the savings could be substantial," he concluded.

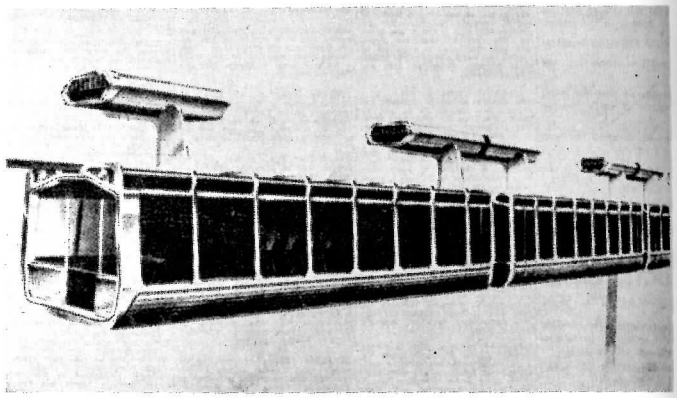
GRAND TRUNK APPLIES TO DISCONTINUE TWO TORONTO-CHICAGO NIGHT TRAINS

Grand Trunk Western Railroad filed a request March 16th with the Interstate Commerce Commission to discontinue two night trains on or about June 1st. The trains to be dropped would be the International Limited--westbound No. 155, and eastbound No. 156 (as well as the connecting CN Port Huron-Toronto trains).

The reason given for the discontinuance of the service is lack of enough passengers to make the run profitable.

STATION ON DISPLAY

The CN station from Thorndale, Ontario, has been acquired by Joe Byway and his son of London, Ontario, and moved to a new location at Thamesford, where it has become the nucleus of a projected transportation display. Also at the same location is CN caboose 78604, plus other material of railway interest. The display will be open from June to September on Sundays only. UCRS members are invited to visit this display; there is no charge to see the station, a 50¢ charge to enter the picnic and park grounds.



ABOVE: A drawing of the proposed rubber-tired, diesel-powered cars for the Niagara Monorail Ltd. line at Niagara Falls, Ont.

MORE ON THE NIAGARA FALLS MONORAIL

Niagara Falls, Ontario--the border tourist centre--is expected to become the site of the longest commercial monorail in the Western Hemisphere, providing public transit for residents of the area as well as scenic views of the falls. Authority for Niagara Monorail Limited to sign an agreement with the city to construct a six-mile $12-million system from the downtown area to suburban Chippawa was approved by the Ontario Legislature private bills committee in mid-March, clearing way for the project.

Harry Howell, operations manager for Goodell Monorail Industries of Salt Lake City, which will build the system through its wholly owned subsidiary, Niagara Monorail, said ground-breaking is expected to start soon and some trains could be operating later this year. Under an agreement with the city, Niagara Monorail will have three years in which to build the structure, erect platforms and begin the system.

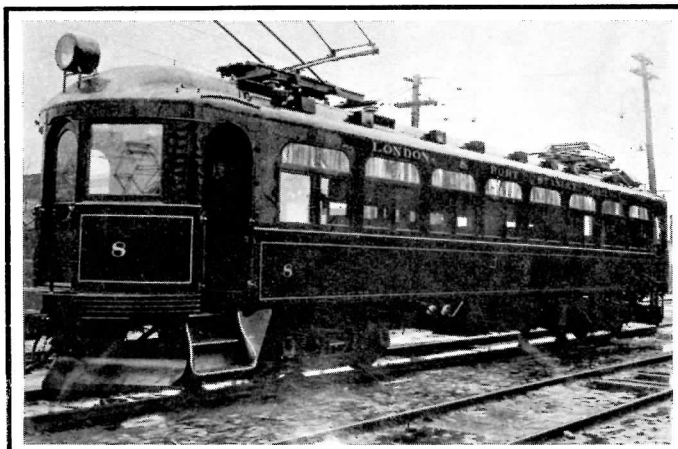
Diesel-powered cars are to ride on rubber tires along rails suspended on towers resembling lamp standards. Trains will operate at speeds up to 20 miles an hour in both directions on a double track. The agreement requires a minimum clearance of 23 feet between monorail cars and the surface of the 16 roadways they will cross. The line will run above tracks of the Penn Central.

First stage of construction will be from Clifton Hill, the heart of the tourist section near the falls, to Heritage Tower, about a mile to the south. There will be stations at Chippawa, Marineland Game Farm, Heritage Tower, Clifton Hill, and at the foot of Queen Street in the city's downtown business section.

The company will pay all costs and set its own fares, and Mr. Howell said there may be special commuter prices for local residents. Tourists will ride the monorail with tickets good for unlimited use of the system within a 24-hour period after the ticket is purchased.

Most of the construction will be handled by local contractors, with supervisory people being brought in. Construction of the monorail's rolling stock will be by a U.S. firm. Each train will consist of three or four 30-passenger units and one power unit.

Mr. Howell said: "We intend to prove that the answer to mass transportation begins 20 feet above the ground.



HELP SAVE L&PS 8

The Ontario Electric Railway Historical Association has concluded an agreement to purchase L&PS car 8 from the Ontario Government for $1000--a very reasonable amount in view of its high scrap value. Half this amount has been paid. Movement costs to the museum site are estimated at $1250, making a total requirement of $1750. The car, now stored at the TTC Hillcrest Shops, must be moved soon. Car 8 will be the largest and fastest unit in the OERHA collection; the museum's catenary overhead will accept pantographs. Will you help finance this? The need is urgent. All contributions are tax-deductable and donors of $10 or more will have their names on a plaque inside the car. Please send donations to: Ontario Electric Railway Historical Association, Box 121, Scarborough, Ontario. Thank you.

OPPOSITE: L&PS car 8 is seen standing outside the shops at London, Ontario in 1926.
-- C. A. Andreae Collection.