

# Canadian Rail



NO. 217  
JANUARY 1970



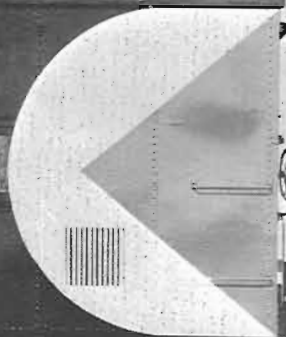
**CP Rail**

**C-4472**

Lt Wt 102900 An10 68

**Robot-2**

Do Not Hump



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DOUG CUMMINGS ON .....

# SLAVE UNITS FOR CANADA'S RAILWAYS

**M**uch information is being generated, exchanged and discussed, these days, relating to the imminent CP RAIL Natal-Roberts Bank, B.C. coal unit-train operation, scheduled to begin in 1970. The loading end of the operation at Natal, B.C., will require at least four special diesel units, equipped with something called "creep control". This new device will enable the 3,000 hp. units to run at speeds as low as 1 to 2 miles per hour, through the loading docks adjacent to the access road to the coal mining operation. At this low speed, the whole train will be loaded in a continuous operation, without coming to a complete stop.

Thus, the diesel units will not have to overcome the total inertia of the 11,000-ton loaded train. After loading, the 4 units will haul the train out of Natal (Sparwood), on the western slope of the Rockies, through Fernie and via the Windermere Sub. to Golden, on the main east-west line of CP RAIL. At Golden, the 4 units with "creep control" will be detached and replaced by eight other units for the run west over Rogers Pass, through the Connaught Tunnel and Albert Canyon to Revelstoke and thence west to Kamloops, Lytton, North Bend and Agassiz, on the way to Roberts Bank, the bulk-terminal superport on the Straits of Georgia, not far from the present Vancouver-Victoria ferry terminal at Tsawassen.

The unit trains are planned to run from Natal to Roberts Bank and return every 72 hours, which implies that one unit train will always be south of Golden on the Windermere Sub, while the

↩ ONE OF JIM SHAUGHNESSY'S EXCELLENT PHOTOS graces this month's cover. Canadian National's no. 2022 and 2 sisters idle on the siding at Gohier Qué. in May, 1969. No. 2022 (c/n M-3491-21) was outshopped by MLW-Worthington Ltd. on March 13, 1968 and is now usually assigned to Montréal-Moncton, NB manifest freight service. Between times, she goes to Montréal East.

← CP RAIL's ROBOT-2 contained the WABCO (Westinghouse Air Brake Corporation) remote-control equipment. Generally similar to the LOGOTROL\* (Radiation, Inc.) system, each Company has their own special refinements. Photo CP RAIL

other two will be west of Golden, at any given time. For the trip from Golden to Roberts Bank, it is presumed that mid train diesel units, under "slave-unit control", will be used. To CP RAIL, "slave-unit control" means ROBOT. ROBOT will be controlling the operation of the mid-train diesel units, hauling the specially-built hoppers each of which carries 105 tons of coal.

It is now necessary to define a few terms. A "slave unit" is, as the name implies, a diesel unit which is being operated according to the commands of a "master" or control unit. CP RAIL seems to have adopted the term "repeater" unit. The controlling mechanism may be installed in either a special car, such as ROBOT, or in a diesel unit, fitted with special equipment. The type of controlling vehicle used depends on the railroad's preference. The results in operation have been varied.

There are advantages and disadvantages in these kinds of installations, depending on the system used. The ROBOT, or its equivalent, can work with any diesel unit having compatible MU-operation equipment. In the event of mechanical problems with the attached diesel unit, it is unnecessary to tie up a specialized or "non-standard" unit in the shops. The electronic equipment in a unit such as ROBOT is generally easier to get at for servicing as well as repairs, compared to a diesel unit with specialized controls. On the other hand, a car like ROBOT represents added weight in the train and too, there may be a limited number of these special cars available.

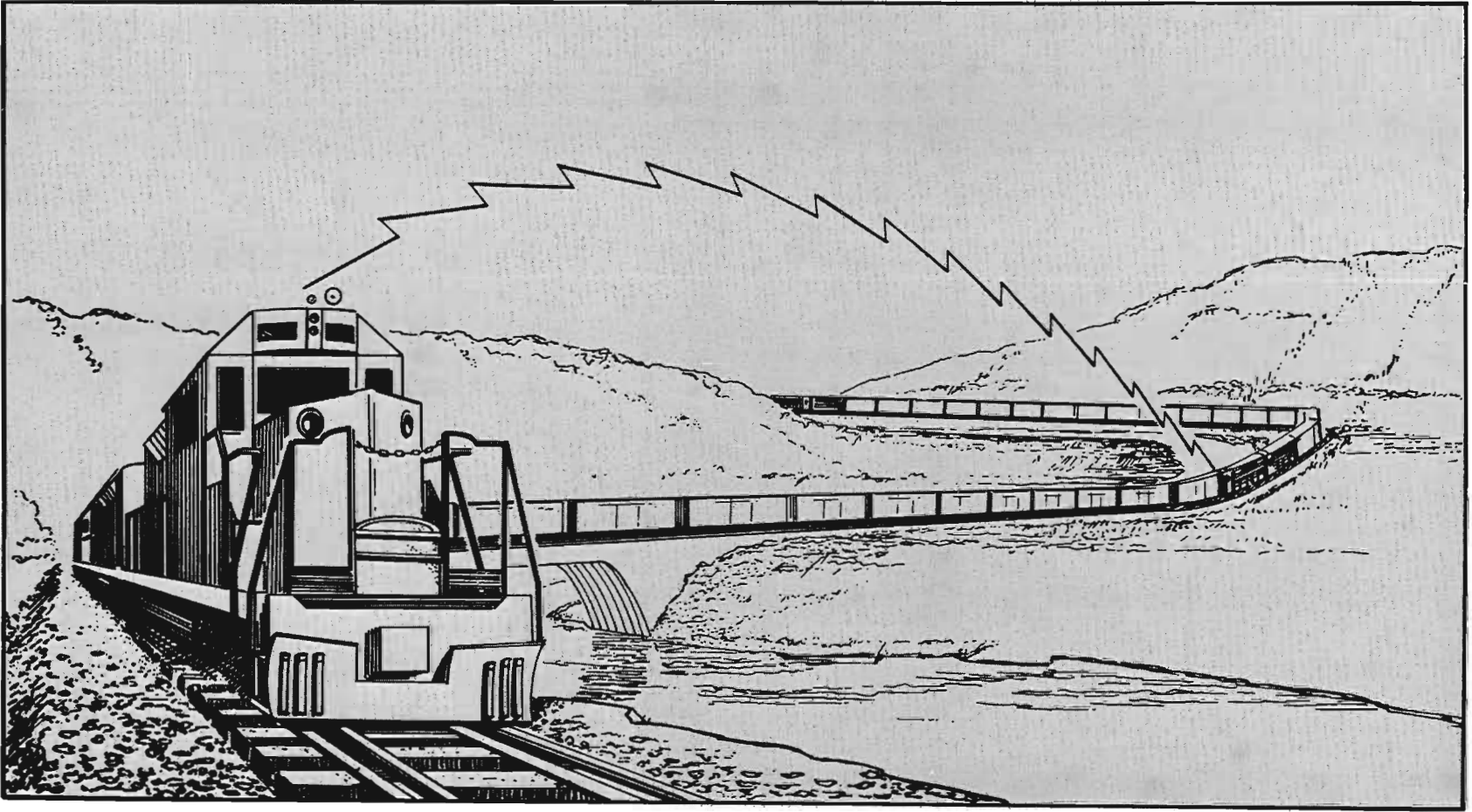
The modern science of electronics has made radio-controlled mid-train helper units practical. It has produced the true "slave" or repeater unit. It has permitted the realization of all of the advantages of a mid-train assisting engine, while avoiding most of its disadvantages. Moreover, it has produced a few side-bonuses to boot! Two pioneers among North American railways in this kind of operation were the Southern Railway and the Great Northern. Nowadays, many railways, among them CP RAIL, are using slave units. These lines include the Milwaukee Road, Northern Pacific, Louisville & Nashville, Union Pacific, Santa Fe and Penn Central. Two basically similar systems are used, one called LOCOTROL (as in ROBOT I), marketed by Radiation, Inc., and the other WABCO RMU, an abbreviation for Westinghouse Air Brake Corporation, Remote Multiple Unit control, as in ROBOT II.

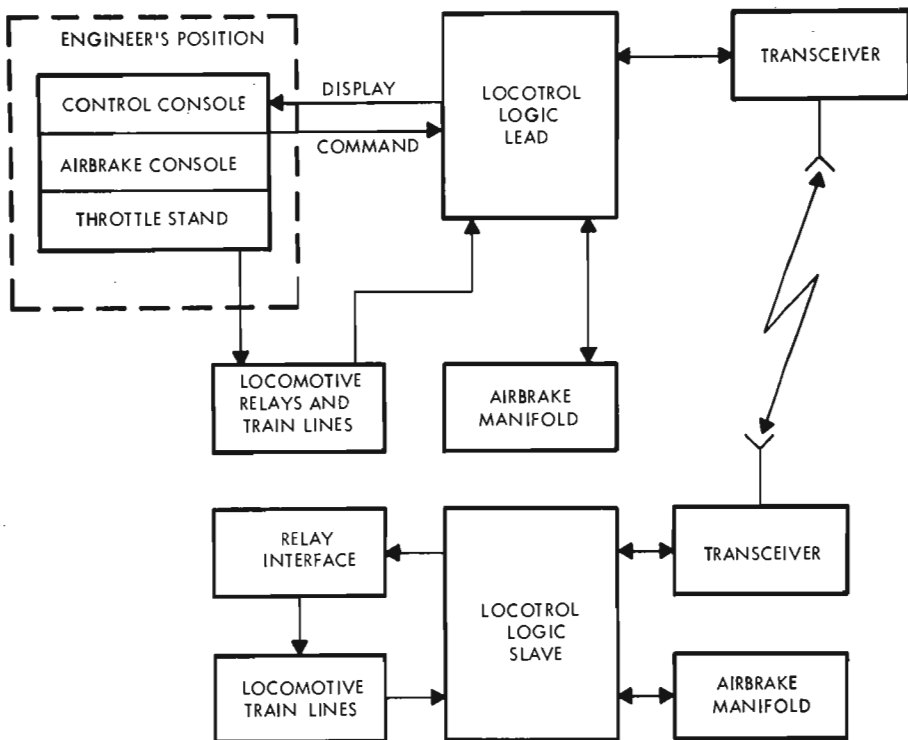
Any railway company obviously has a choice as to where to install this new electronic equipment. It can be placed in a special car like ROBOT or it can be fitted in a specially modified diesel unit, either hood or cab. If the latter choice is selected,



SCHEMATIC ILLUSTRATION of communication from "master" unit to "slave" unit.

Sketch courtesy Radiation, Inc.





↑ SCHEMATIC DIAGRAM of "slave" unit control system.

then the mid-train units will usually be paired. With a ROBOT in charge, most any MU'ed unit can be used. If one of the mid-train diesels has the special radio-receiving and transmitting instrumentation, then it becomes a very special and indispensable unit and must be kept in service at all costs.

When a ROBOT-type control car is used, one of the head-end train units must be modified to include radio-signal sending and receiving equipment and therefore the greatest utilization of this specially-equipped diesel unit is as the lead unit on a freight or unit train with mid-train slave units. Moreover, it is only one "conversion", whereas if a ROBOT-type control car is not used, then one of the mid-train diesel units must also be specially equipped. The "command" unit on the head-end is fitted with a computer-like electronic assembly, which can send a radio signal back to the control car and thence through the MU connections to the slave unit or units, ordering a certain function to be performed. After this "command" has been carried out, the slave unit, through the control car, sends a return radio signal to the command unit, confirming that the function has indeed been performed.

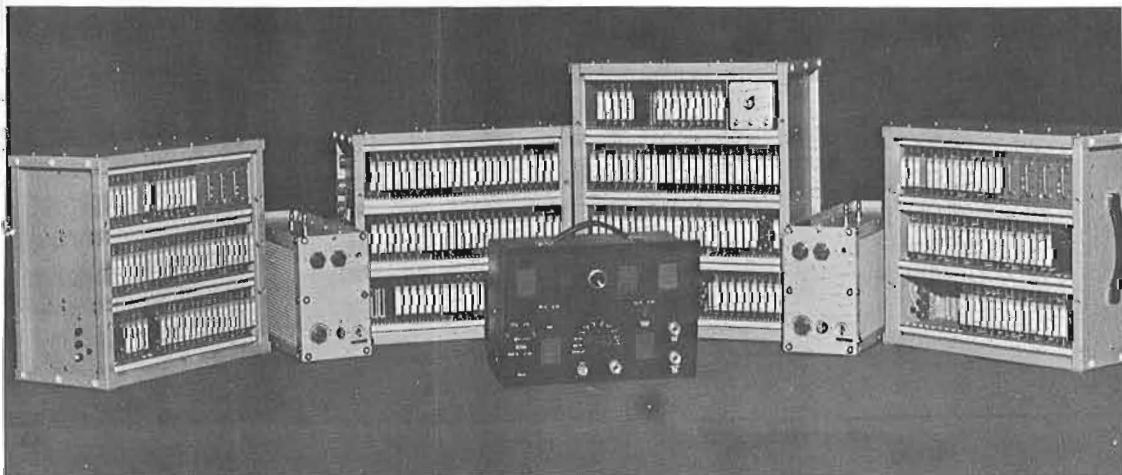
Operating "statistics", which could otherwise be described as the various positions and conditions of the slave units

are continuously available to the command unit, so that the train engineer can tell what the mid-train units are doing, - or not doing! If necessary, he can initiate the proper instruction to change or modify the operation of these mid-train units, through a series of radio signals.

To assure that commands (radio signals) from the head-end are received and obeyed only by the specific slave units to which they are directed, a special identification signal must precede the command from the lead diesel (master) unit to the control car (ROBOT) or the specially-equipped mid-train diesel. If the signal being sent is accidentally received by the control car of another train on an adjacent track, it is disregarded, since it was not preceded by the correct code. If the command is preceded by the proper code, it is received by the appropriate control car, acknowledged, then retransmitted, confirmed and carried out. This coding, receiving, decoding and acknowledgement procedure may seem to be a very lengthy procedure, but since the whole operation is performed in microseconds, it is to all intents and purposes instantaneous.

The application of this system by different railways can vary but generally, the command is repeated and confirmed on a pattern previously established by programming the sending and receiving computers. This process, called continuity, may be conducted several times a minute or, indeed, every few seconds. The command diesel unit usually has a separate instrument panel which indicates the readings on the corresponding panel in the slave units. Thus, the train engineer in the command unit, while he may be half-a-mile or more away from the mid-train slaves, is still able to

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WOULD YOU BELIEVE - one complete LOCOTROL\* system, including the "master" and "slave" station equipment, - logic cabinets, power sources and control console. All equipment is designed to withstand the mechanical shocks of train operation.  
Photo Radiation, Inc.







↑ THE CONTROL POSITION IN THE MASTER CONTROL UNIT. All of the accessories necessary to the control of head-end and slave units are provided on or near the unit control panel. Photo Radiation, Incorporated.

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tell what is happening in their operation. Have their motors cut out? Are their wheels slipping? Or are they indeed on fire? Slave-unit obedience through radio signals and standard MU controls is assured, just as if a real, live engineer were sitting in the cab with his hand on the throttle and his eye on the amperage!

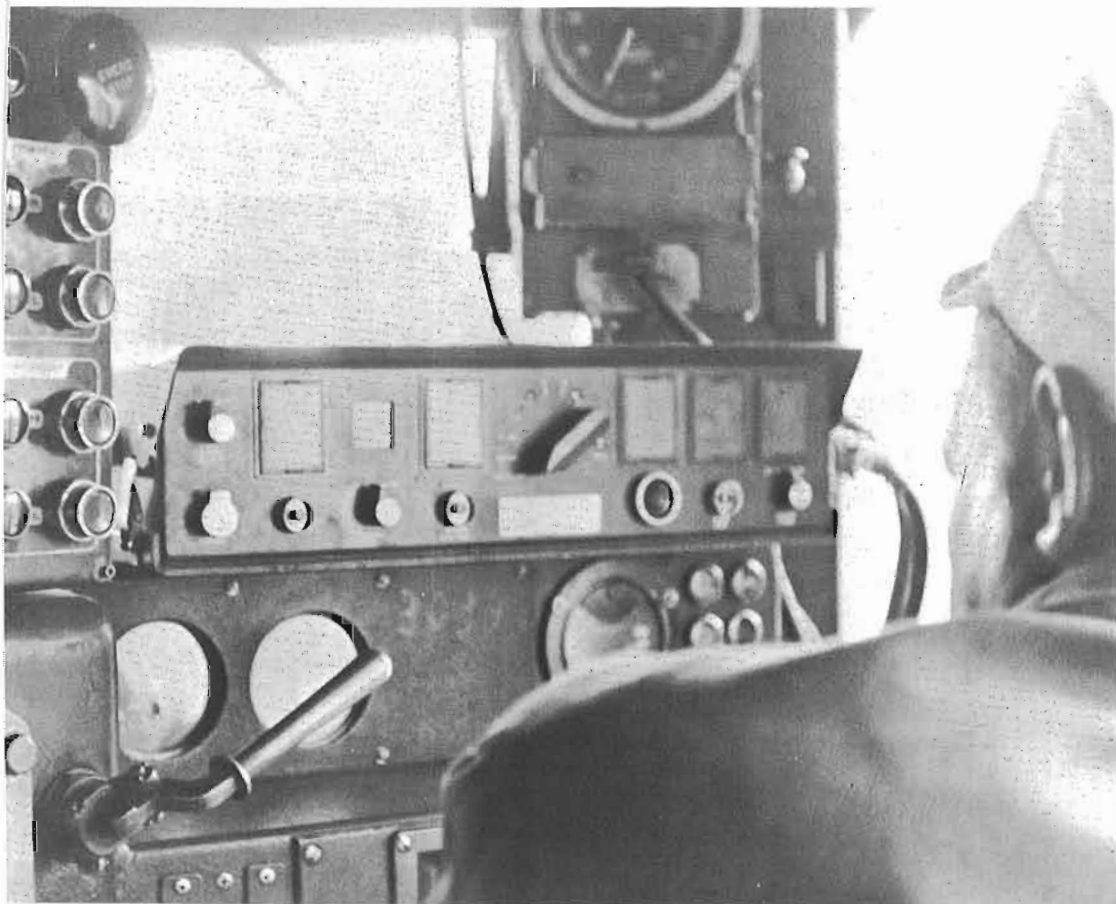
As a "fail-safe" measure, the mid train slave units may be programmed to reset to the "idle" position, in the event of a brake application by the train engineer, or simply because of some variation in train-line air pressure, caused by the breaking of an air hose or the derailment of a car. The slave units will remain in the "idle" position until a new command is transmitted from the train engineer in the lead unit. In normal train operation in mountainous or undulating terrain, the long freight train may be passing through rock cuts, around curves and through tunnels. In these locations, radio signal reception may be poor or non-existent. While passing through such areas, a "hold" command can be manually or automatically initiated, so that the slave units will continue to obey the last command received, for a predetermined length of time and, if no new command is subsequently received, they will go into the "idle" position until another command is sent from the master unit by the engineer. Sometimes, in stretches of track where radio-signal transmission is of unreliable quality or entirely im-



possible, an induction cable is laid along the trackside or strung on telegraph poles. Now the command unit at the head of the train can transmit and receive through the cable and thus communicate instantly with the mid-train units.

Mid-train control cars like ROBOT do not necessarily need to be new, specially-built equipment, but may be cars converted from other uses. Some railroads use older diesel units, with the prime mover taken out. These units, or rather their traction motors, operate on power generated by an adjacent unit, in the same fashion that the "cow" powers the "calf" in hump-yard operation. Some control units for the mid-train location will have their diesel engines still in place and the control equipment fitted into the spaces formerly occupied by the steam generator or other non-essential equipment. Some control cars, like ROBOT, are rebuilt freight or baggage cars. CP RAIL, for example, is using rebuilt medium-weight box-baggage cars, formerly used to transport shipments of silk from west-coast ports to the east and later used as baggage

THE ENGINEER'S-EYE VIEW OF THE CONTROL PANEL ON THE MASTER CONTROL UNIT. The dials on the upper panel plus the mode-selector switch provide operating information to the main control position. Photo Radiation, Inc.



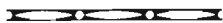
and express cars on regular passenger trains. When rebuilt and with the necessary electronic equipment installed for slave-unit control the interiors of these cars might be expected to contain a "Pandora's Box" of marvels, but this is not the case. Anyone peeking inside would be disappointed by the few rectangular metal boxes at various locations and the rather large bundles of wires connecting them. That's about all. These cars do have small oil heaters provided, to raise the temperature of the interior of the car in cold weather, since the specialized gadgetry is known to function less efficiently at lower temperatures.

Another application of mid-train slave units which is not widely recognized, is for train braking. On hundred-or-more car freights, sticking brakes or leaky air-hoses or slow responses to changes in train-line air pressure can have very serious results. In addition, attaining normal train-line air pressure and subsequent brake tests, required before the train leaves the terminal yard, can take a lot of time when it all has to be done from and by the diesel units at the head of the train. Of course, if mid-train units are required for additional motive power, they can also be used to pump air into the train-line. These slave units can also be programmed to apply or release brakes, thus supplementing the braking action of the head-end units.

At least one test has been conducted on a Canadian railway, operating through variable country, where the only power on the head-end was one command unit. The remainder of the power, some 4 or 5 equally-powerful units, was all located at mid-train, being directed through a control car with normal diesel MU connections.

Many variations on this theme of mid-train power are possible, at the discretion of the purchaser. However, no reports have been seen of a railway using all of the variations of this equipment. It is technically possible to perform all of the variations and "way-out" operations, but there are certain accessory considerations which must first be resolved. These difficulties are operational and not technical. For example, when a long freight arrives at a terminal, the engineer in the head-end command unit could cut the train just ahead of the mid-train units and then switch the front section of the train to the appropriate siding. Then, through an auxiliary control position, he could "command" the slave units to bring forward the remainder of the train and place it on another siding. He could order the slave units to join the head-end units and all of the motive power could thus proceed together to the maintenance shops.

Carrying this idea to the ultimate but rather impractical conclusion, one might postulate the movement of command and slave



CP RAIL's 1967 EXPO LIMITED (no.5) westbound between the upper and lower Spiral Tunnels with units nos. 8682, 8514, 8519 and 8521 (no. 8682 has no steam generator). Picture was taken by Mr. A.H. Coverdale, Calgary, Alta.



units independently to servicing points or during the conduct of the necessary switching movements. One might even imagine the line-side operation of crewless trains on a programmed schedule, being monitored by operators in wayside stations.

However, many operational and safety considerations are thereby brought into prominence. These requirements of paramount importance will always necessitate that the operation of long trains be closely watched. Grade crossings, hot-boxes, rock slides, falling trees, washouts and many, many other unanticipated operating hazards will still require the presence of the train crew, to observe, evaluate and take essential corrective action.

Mention has been made of the use of mid-train diesel units for reasons other than power. On essentially flat terrain, the "power" requirement is absent. But there is still the necessity for adequate braking control on very long freights. If power is not required, let us remove it. Now we are left with the accessory air-braking equipment. We now have a remotely-controlled mid-train air-brake car (engine). It may be either a converted diesel unit or a piece of rolling stock containing a small diesel engine, powering a compressor unit and having the appropriate apparatus to receive and send radio signals from and to the command unit. The primary function of such a unit would be to build up and maintain the train-line air pressure rapidly. However, with the added electronic equipment, it can apply and release the brakes, on command, on the part of the train over which it has braking jurisdiction.

Such unusual units could also help to pump up the train-line at terminals and could restore train-line air pressure quickly, after brake tests or applications. When these air-brake cars or units are used, the regular diesel unit which would otherwise be required is available for use elsewhere. At least one large Canadian railway is presently experimenting with such a mid-train slave air-brake unit, designed for service in long freights running across flat country where a large amount of horsepower is not needed but where adequate air-brake control must be maintained.

It is certainly obvious that the future possibilities of remotely-controlled diesel units have just begun to be explored. The first step from the single to the multiple-unit diesel operation has already been taken. The fallacy of unlimited addition of power to the head-end of freight trains has been demonstrated. Curiously enough, the success of this head-end unit addition was directly proportional to the number of pulled drawbars! More than that. The most recent experience has shown that, with some designs of diesel-unit trucks, too heavy a tonnage on the unit drawbar may place a severe and unequal strain on the rear truck of the unit, resulting in burnt-out motors or cracked truck castings. The introduction of the mid-train unit represents, in a measure, the solution to this problem.

The continuous, perfect control of slave units is still some distance in the future. That is why CP RAIL's operating experience with long coal unit-trains will be closely watched, as they wind up and over Rogers Pass, early in 1970.

# ESPRIT DE VAPEUR

## Le 6218 est de Retour !

J.-M. Leclerc

**S**AMEDI LE 11 OCTOBRE DERNIER, un train spécial nolisé par l'Association Historique Canadienne du Chemin de Fer a fait un voyage de Montréal à Québec. Le 6218 du CN, une grosse machine du type 4-8-4, qui jusqu'à 1960 tirait l'Express Maritime et l'Océan Limité, tirant six wagons d'époque peints vert et noir, arrivait à Charny à 2.30 h. p.m.

Son sifflet strident et le bruit de la vapeur, le panache de fumée, avait attiré de nombreux spectateurs à la gare de Charny. Plusieurs cheminots retraités qui revivaient avec nostalgie l'époque qu'ils avaient connue, ou les trains étaient associés avec l'idée de puissance et de rapidité, la 6218 pouvait atteindre cent milles à l'heure avec douze wagons.

A L'arrivée à la gare de Charny, le mécanicien en était-il conscient? Il fit retentir plusieurs fois le sifflet strident de la machine. Des retraités du CN et des amateurs de chemins de fer manifestaient leur joie. Je vis même quelques uns essayer une larme furtive, prétextant la fumée qui leur montait aux yeux. Nous eumes le privilège de monter sur le train. Les wagons étaient du modèle de 1939, fenêtres grandes ouvertes laissant pénétrer le bruit des roues sur les rails, les haletements de la machine, ponctués de nombreux coups de sifflets.

Le train spécial traversa le Pont de Québec, le bruit était assourdissant à Ste-Foy, il y avait une foule des parents, des enfants qui pour la première fois voyaient ce monstre haletant. Des cris d'admiration. On reprit de la vitesse pour atteindre Québec. Il y a dix à douze passages à niveau pour atteindre la gare du Palais à Québec. A chaque passage, le mécanicien faisait retentir le puissant sifflet. De nombreux citoyens de Québec prenaient des photos, plusieurs avaient magnétophones pour enregistrer le bruit du train et le puissant sifflet.

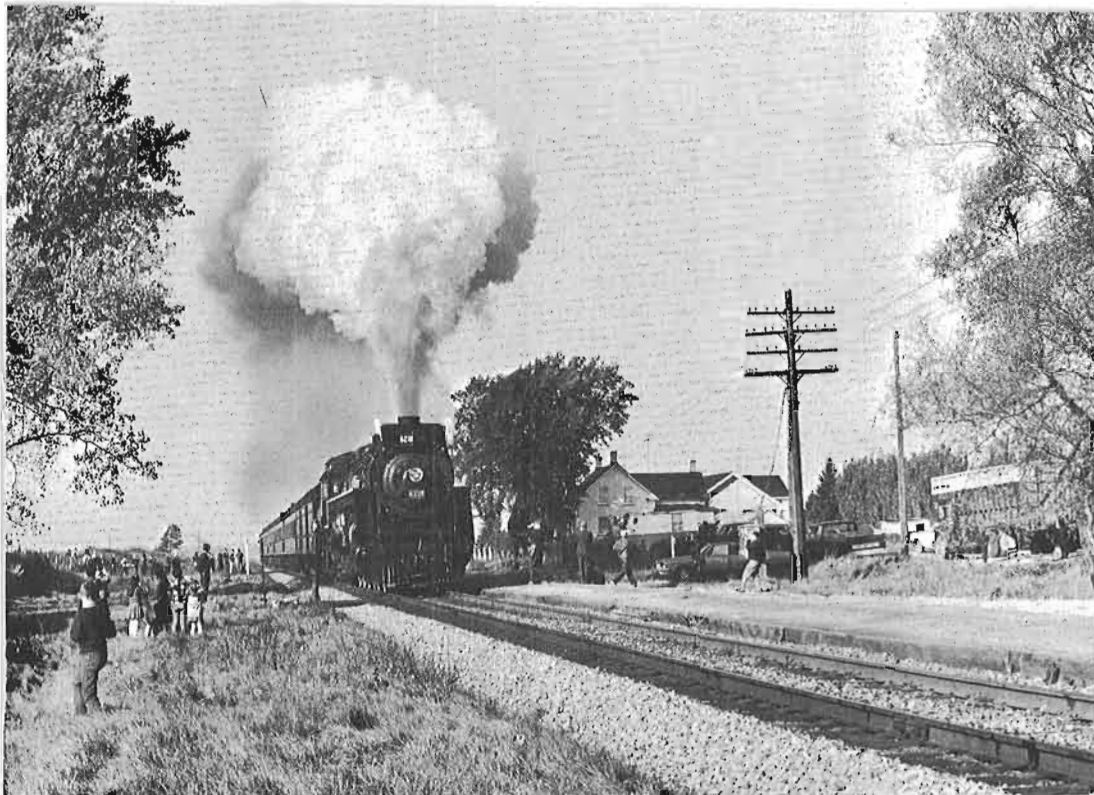
L'arrivée à la gare du Palais de ce train d'autrefois fut salué par un millier de personnes. Le 6218 fut détachée du train, se rendit près de la rue St-Paul, ou une voiture pompe du Service des incendies de Québec attendait pour remplir la provision d'eau de 18,500 gallons dans le tender de la grosse locomotive, pour permettre le retour à Montréal. Des centaines de Québécois revivaient un rêve de leur enfance. Qui n'a rêvé un jour de conduire une locomotive? C'était un moment de rêve pour plusieurs; on se pressait près de l'énorme machine, mais il fallait retourner la 6218, qui recula lentement dans un nuage de fumée et de vapeur, pour de nouveau s'atteler au train.

Le mécanicien avait peut-être la nostalgie du temps où les trains étaient des vrais trains. A chaque traverse à niveau, il fit



THE EVER-LOVIN', LIVIN' IMAGE of Canadian National's GREAT PUMPKIN (with apologies to Schultz) no. 6218, made one of her all too-infrequent appearances at the Museum of Science and Technology, Ottawa, Canada, in September, 1969. Photo courtesy of J. Langevin, Ottawa, Ont.





ROARING DOWN THE MAIN LINE with a merveilleux panache de vapeur, no. 6218 gladdens the hearts of the amis du chemin de fer! Later, under the watchful eye of the road foreman, she steams quietly in the bright sunshine. Photo courtesy J. Langevin, Ottawa, Ont.





entendre le sifflet;c'était l'adieu de la 6218 à Québec en cette belle journée d'automne où le soleil éclairait le paysage d'or et de pourpre. On retraversa le fameux Pont de Québec,le bruit des roues sur les rails et les hailetements puissants de la 6218 tirant les wagons qui percutaient par les fenêtres ouvertes était comme une symphonie dans ce bel après-midi d'automne.

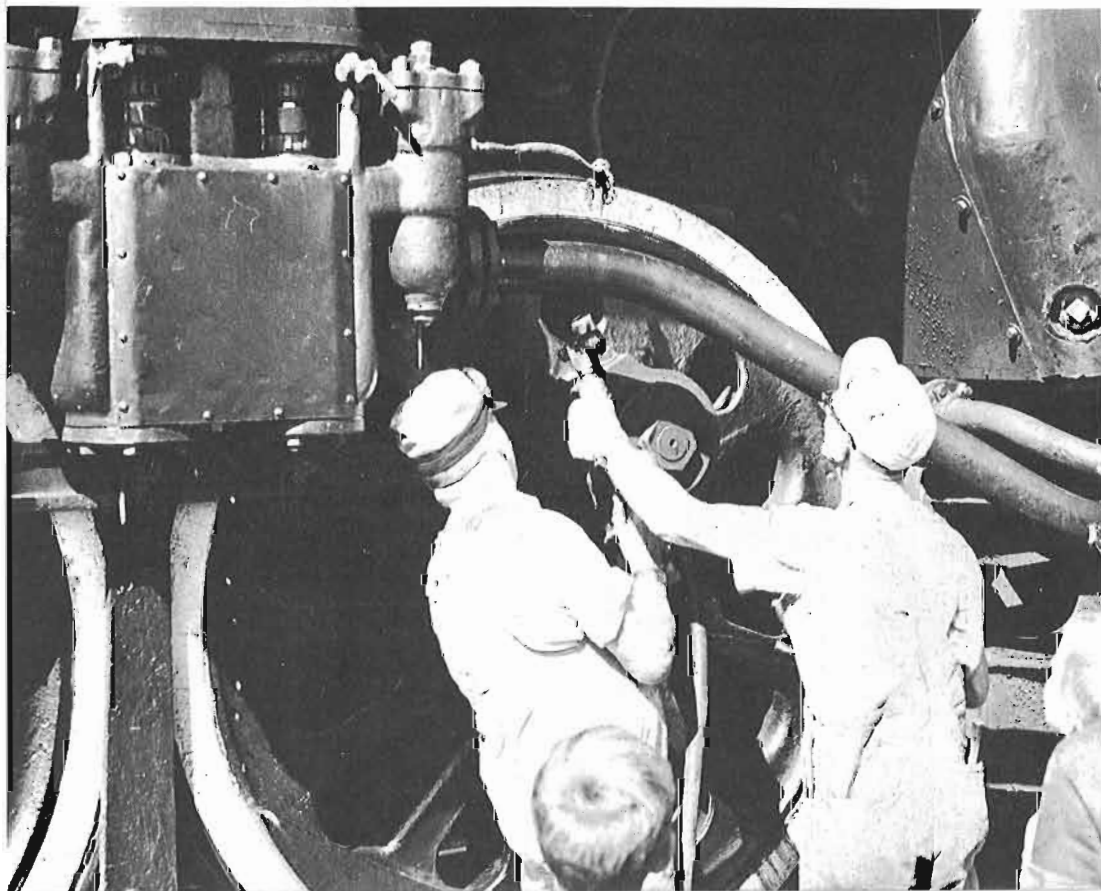
A Charny au retour,la foule était toujours dense,un court arrêt pour laisser descendre l'auteur de cet article et son fils, et le train disparaît dans le soleil couchant. Le panache de fumée et quelques coups de sifflet et le train disparaît sur les rails luisants. La 6218 et sa convoi d'autrefois nous laissait tous rêveurs sur le quai de la gare de Charny.

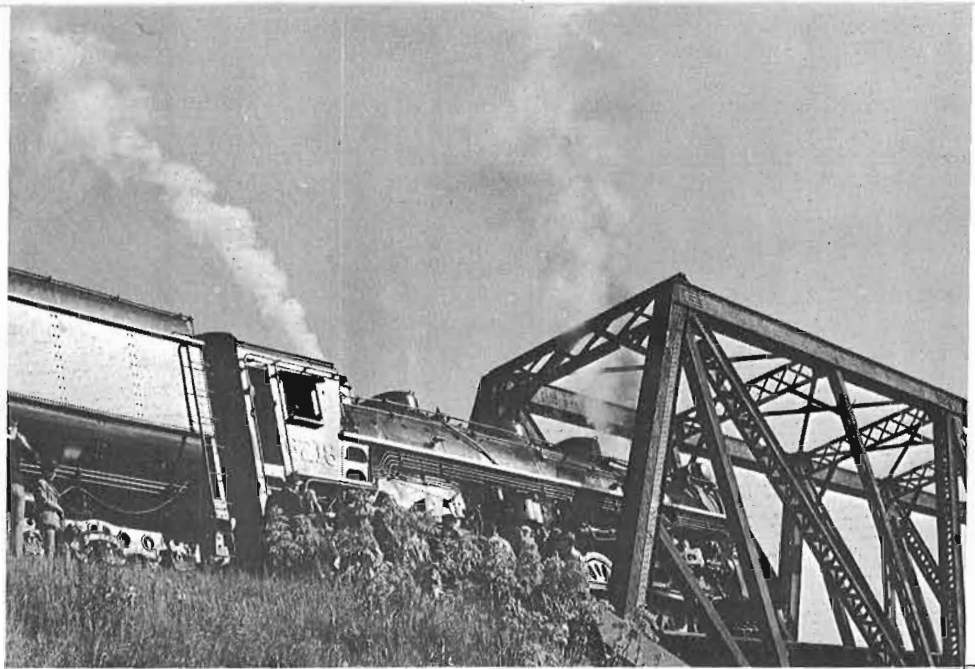
NO. 6218 PAUSES ON THE BRIDGE AT Upton,Qué.,before setting out on the next stage of the October,1969,trip to Victoriaville and Québec.

Photo courtesy J. Langevin,Ottawa,Can.

A LITTLE TIGHTENING HERE - A SPOT OF OIL THERE generally suffices to keep Her Excellency No. 6218 in good spirits. Her able attendants were providing a little "t.l.c." (tender,loving care) at the Museum of Science and Technology,Ottawa,Canada,on September 20,1969.

Photo courtesy J. Langevin,Ottawa,Can.





### Resumé.

#### Spirit of Steam.

#### No. 6218 makes a Comeback.

Saturday, October 11, 1969, a special train organized by the C.R. H.A. made a trip from Montréal to Québec..... hauled by the 6218 which, up until 1960 hauled the Maritime express and the Ocean Limited, leading 6 passenger cars of that era, painted green and gold...

Its strident whistle and the sound of the steam...attracted a number of spectators.....together with a number of CN pensioners.

The special train traversed the famous Québec Bridge and the noise of arrival at Ste-Foy was overpowering..... Many of Québec's citizens came to welcome the train on its arrival at Palais Station equipped with cameras and tape-recorders, the latter to record the sound of the train and the piercing whistle.....the engine was uncoupled from the train and moved to a siding near St-Paul Street where the fire brigade was waiting to fill up the tender with water. Hundreds of Québécois watching evoked their childhood dream of being an engineer of a huge locomotive. They crowded around the magnificent machine to get a closer look, but soon it was time for 6218 to rejoin its train for the trip back to Montréal.

The special crossed the Québec Bridge once again, with a clatter and a rumble, 6218's piercing whistle echoing from the girders. The robust exhaust could be heard through the open windows of each passenger car, creating an autumn symphony with the clickety-clack of the wheels on the rails.

There were still many people at the station when the train returned to Charny and stopped to leave the author of this story and his son. With a mounting pillar of smoke and some blasts of the whistle, the train rumbled westward over the gleaming rails. 6218 and her train of yesterday disappeared into the sunset, leaving us all dreaming on the platform of the station at Charny.

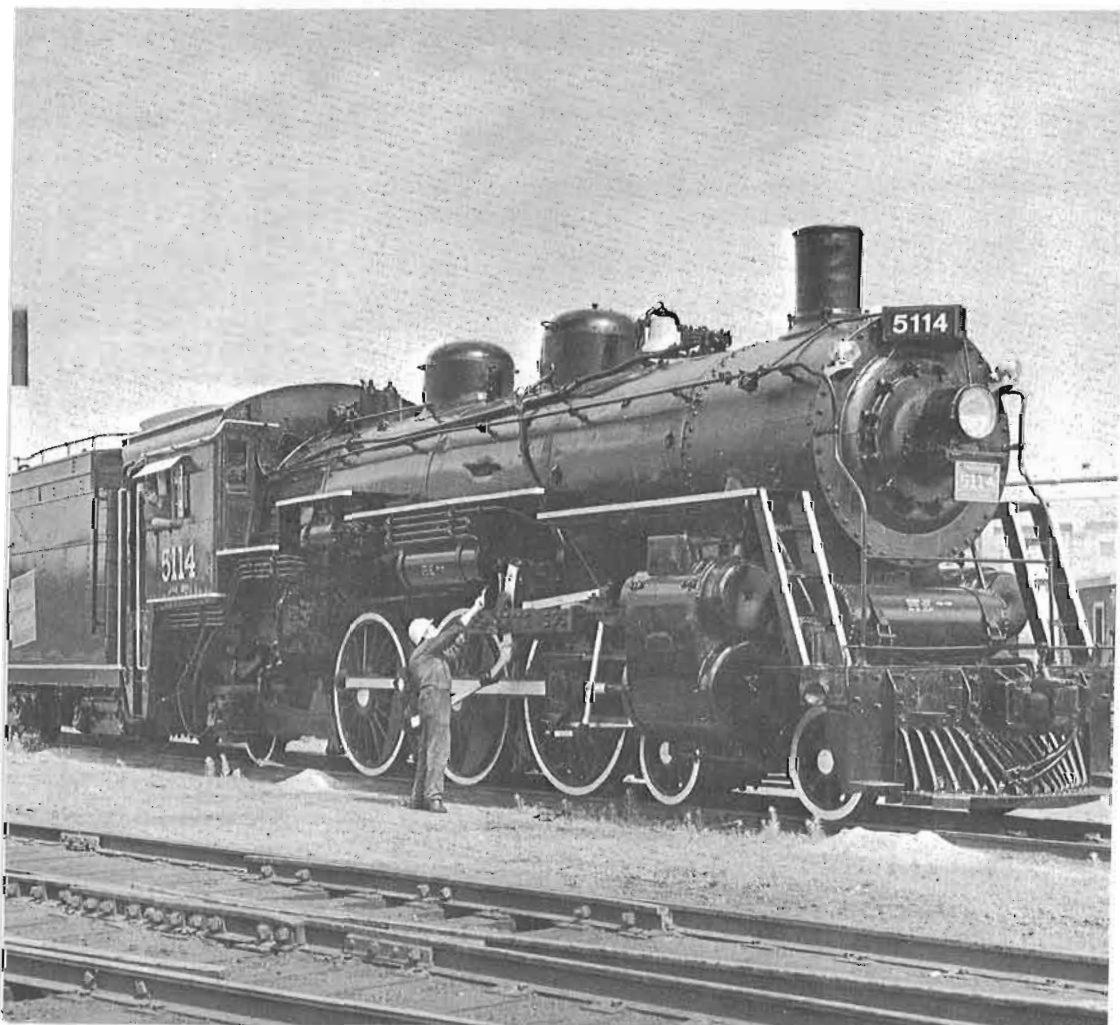
# MELVILLE'S MONUMENT

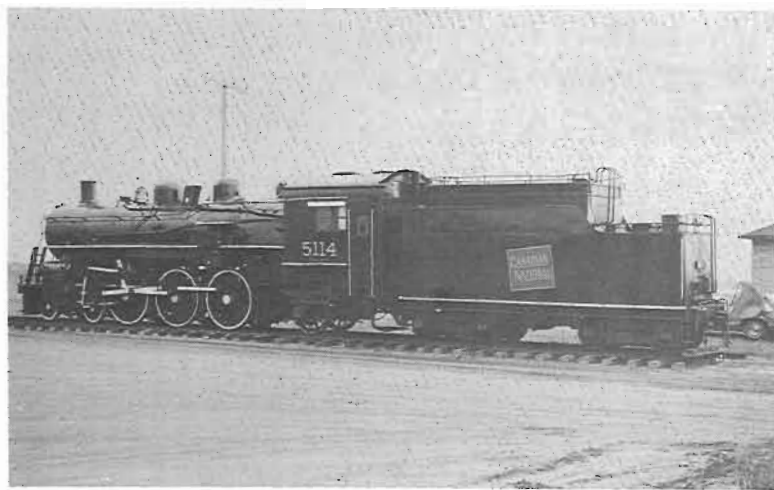
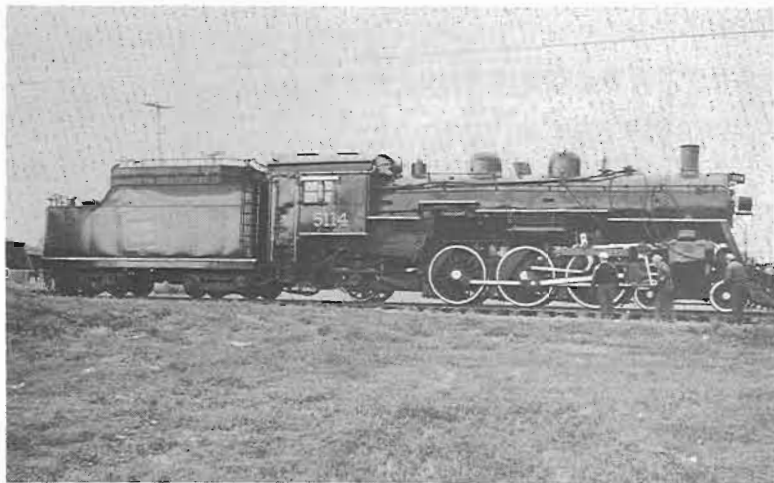
Photos by

Mr. K.G.Younger

Mr. J.S.Nicholson

**O**ur Prairie colleagues, Mr. K.G.Younger of Winnipeg and Mr. J.S.Nicholson of Saskatoon have combined to produce an up-to-date pictorial record of the doings of Canadian National Railway's Pacific no. 5114, formerly held at CN's Transcona Shops at Winnipeg, Man.





This locomotive, the last of the prairie steamers, was officially donated to the City of Melville, Sask., on September 22, 1969, by CN Prairie Region Vice-President Mr. E.P. Stephenson. Symbolic transfer of the veteran locomotive was accomplished when Mr. Stephenson presented a gilded brake handle for the locomotive to the Mayor of Melville, His Worship Peter Dielschneider.

Dr. David Ames, Chairman of the Regional Park Board and Master of Ceremonies for the presentation, expressed the thanks of the citizens to the Melville Jaycees, who through a mammoth WALKATHON, raised a considerable amount of money, the interest on which will finance annual maintenance for No. 5114. He also paid tribute to the work of Mr. Grant Lawson and his crew, through whose voluntary efforts the locomotive was moved to its permanent location.

In his remarks, Mr. Stephenson reminded his audience that it had been more than sixty years since the steam locomotive first arrived in Melville and that the day's ceremony was to welcome back Number 5114 as a permanent guest, "to remind us all of the important role that steam (railroading) has played in the history of this City". Reviewing the life of Number 5114, Mr. Stephenson recalled that she was used for several years in passenger service in and out of Saskatoon and had been, without doubt, a frequent visitor to Melville. She was Canadian National's last steam locomotive in storage in western Canada.

A member of CN's class J-4-d, Number 5114 was part of an order of locomotives built by Montreal Locomotive Works, Limited, in 1919 (B/N 61480, Order Q 273). Originally designed to burn coal, she was converted to an oil-burner in her latter years. When operating she weighed 216 tons and had an overall length, including the tender of 76 feet. Most of her total mileage was run in eastern Canada, on trains out of Toronto, but in 1958, she was one of a group of CN locomotives transferred to western Canada. Her final tour of duty in service came in 1960, when she was leased for several months to the Northern Alberta Railways. Prior to her advent to the City of Melville, Number 5114 was restored exteriorally to her appearance when she belonged to Canadian National Railways in the late 1950's.

The first picture in the sequence, taken by Mr. K.G. Younger, shows Number 5114 after her beauty treatment at CN's Transcona Shops. The remainder of the illustrations, taken by Mr. J.S. Nicholson show the locomotive at various locations, during her run from the CN yards to the exhibition site.

→ THE MOST VALUABLE SQUARE MILE OF INDUSTRIAL REAL ESTATE in Atlantic Canada, - Saint John, N.B.'s GRANDVIEW INDUSTRIAL PARK. At the bottom of the picture, the Saint John Shipbuilding and Drydock Company Limited; in the middle foreground is the giant Rothesay Paper Corporation newsprint mill. Nearby is the multi-million dollar thermal power plant of the New Brunswick Electric Power Commission. At the top of the picture is the huge refinery of Irving Oil Company Limited-Irving Refinery Limited, scheduled for expansion. Grandview Industrial Park is outlined and indicated by an arrow at the top right.

# NOTHING EVER HAPPENS IN THE MARITIMES

Phillip Fine.

Photos by the Author.

**J**ust in case the impression has been created that all of the visitors to Prince Edward Island this past summer have been just sitting around doing nothing, it should be acknowledged that after two or three days of rest, they are anxious to start looking for something else to do. They want to be AMUSED!









The newest thing advertised by Canadian National Railways was a "Moonlight Cruise" on the M.V. LUCY MAUD MONTGOMERY. This unusual diversion started on August 19 from Charlottetown Harbour, with a dance band and all the other "ingredients" aboard the ship for a four-and-a-half hour evening's entertainment.

The ship left Charlottetown at 9 p.m. and returned in the scandalous wee hours of the morning. This was a change of pace from the diet of potato juice normally available to visitors wishing to sample the wilder side of Charlottetown's nocturnal activities. The press release was very "pure" in its description of "other ingredients", mentioned above, probably due to intimidation by the local temperance societies, but noted that the LUCY MAUD was, in some ways a floating nightclub. The very idea of serving Green Gables Rum on board the ship is quite terrifying, especially in the light of bitter experience and the known aftereffects.

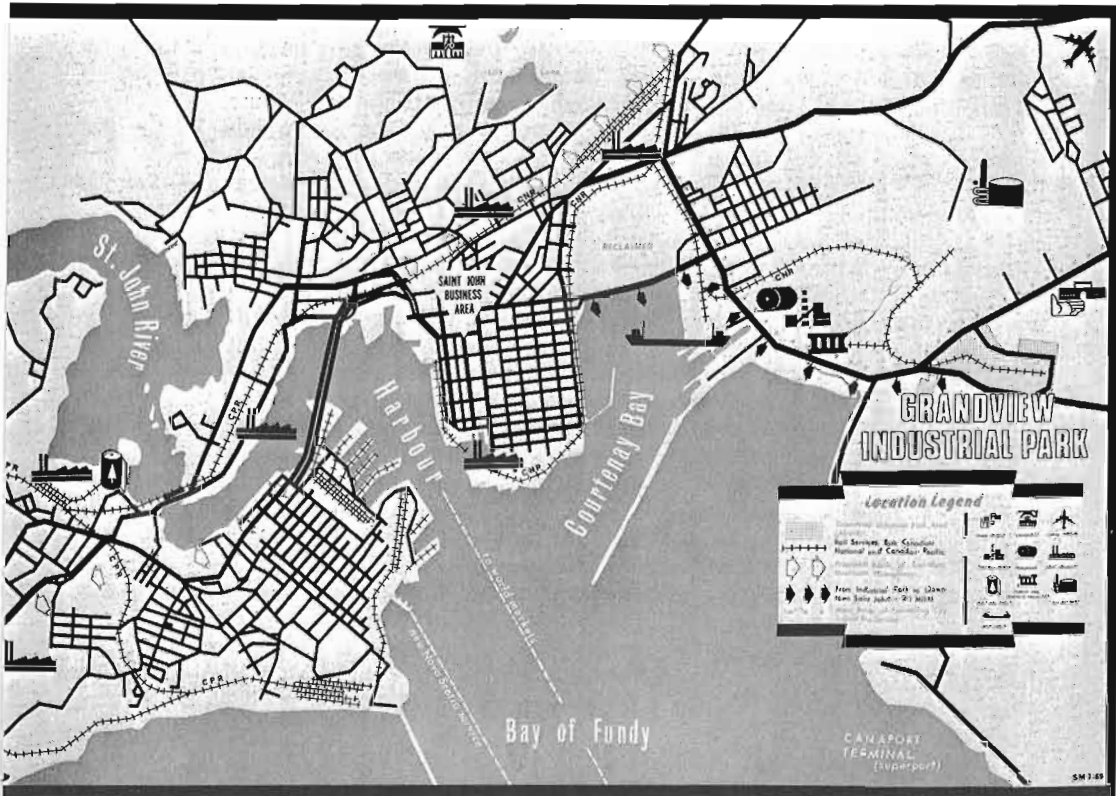
The M.V. LUCY MAUD MONTGOMERY is usually tied up at night, due to the fact that the M.V. JOHN HAMILTON GRAY and M.V. ABEGWEIT have more than enough capacity to handle the flow of traffic in midweek periods.

A recent visit to the bustling Bay of Fundy port of Saint John, N.B., required an inspection of the preparations being made for Mr. K.C. Irving's SUPERPORT at Mispec, a projected deepwater terminal some four and a half miles southeast of the Irving Refinery. Despite all of the recent local publicity and public interest, the entrance to the site was as thoroughly shrouded in secrecy as the U.S.S.R.'s rocket base in central Asia. However, two large oil storage tanks are too big to be camouflaged and the six additional monsters indicated on the blueprints will be visible for miles! Other accessories will be a pipeline from the refinery to a dock about a mile offshore in the Bay of Fundy, where supertankers can tie up and discharge the crude. From the Mispec Superport tanks, the crude oil will be pipelined to the refinery, much to the chagrin of CN, who could do it in tank cars on an extension of their Grandview Industrial Park spur. Further developments are awaited with keen anticipation.

In the City of Saint John itself, CP RAIL has completed its new access line to the Union Station. The new line was completed in April, 1969 and is now (August) fully ballasted, signalled and ready for use. This new approach line was necessary due to the construction of the new Mill Street Viaduct and the expressway connections to the Harbour Bridge and West Saint John. Not all of the old line has been demolished, as part of it serves as the lead tracks to CP RAIL's express and express-freight yard, near Union Station. Preliminary construction of an extension to the expressway east towards Cold Brook and the present Saint John-Moncton highway has resulted in the dismantling of one corner of Union Station trainshed, with eventual demolition of this noteworthy structure a strong possibility.



← ONE OF THE MOST RECENT CN SHIPS in Northumberland Straits service - the M.V. LUCY MAUD MONTGOMERY, scene of some high goings-on in the summer of 1969.

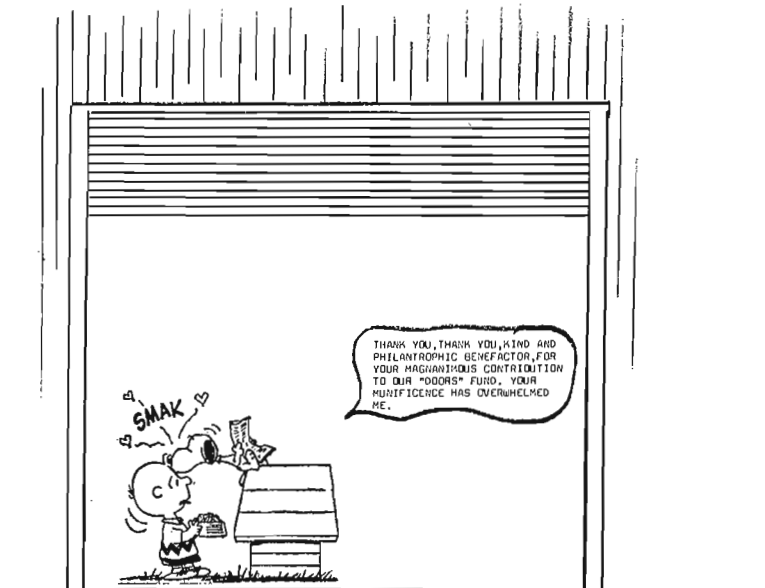


THE MAP shows the general area surrounding the Port of Saint John, N.B. The large area to the left of the Harbour is West Saint John, long the site of CP RAIL's port complex. The new expressway connection from West Saint John to the City Centre is shown, as is the Irwin Refining Limited and the Grandview Industrial Park. Not so obvious is the CP RAIL-CN station in the business area of the City. The photograph shows the beginning of the demolition of the old station, - the Union Station, used by both Canadian National and CP RAIL.

From the foregoing, you can conclude that the idea that nothing ever happens in Canada's Maritime Provinces is quite wrong. Where else in Canada can you get "scandalous" moonlight voyages on a floating nightclub and where else could you find a superport operation sponsored by a very private and extremely independent oil company?

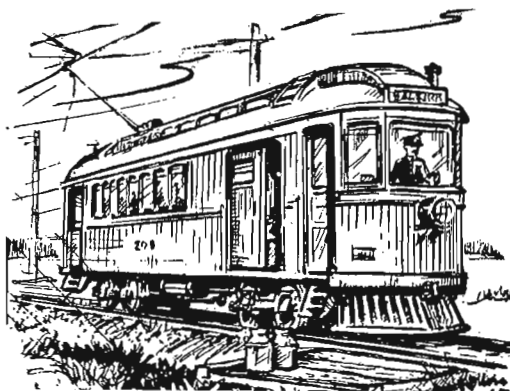
# DOORS . . . ?

\$ 1,000  
 \$ 2,000  
 \$ 3,000  
 \$ 4,000  
 \$ 5,000  
 \$ 6,000



The following contributors for the DOORS Fund for Building Number 2 at the Canadian Railway Museum are gratefully acknowledged:

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BY F. A. KEMP

CANADIAN NATIONAL CHANGES PASSENGER SERVICES AGAIN-----  
 January 7, 1970, marked another "change of time" for Canadian National passenger trains. The latest trains to be "axed" were Trains 5 & 6, the PANORAMA, between Winnipeg, Man. and Vancouver, B.C. and Trains 16 & 17, the CHALEUR, between Montréal, Qué. and Moncton, N.B. Trains 14 & 15, the CHALEUR, will be re-timed to connect with the SCOTIAN (Train 12) eastbound and the OCEAN, westbound, with through equipment to and from Montréal. New Brunswick's capital, Fredericton, will be provided with a bus connection with the OCEAN at Newcastle, N.B. Daily RAILINERS will run from Montréal to Edmunston, N.B. and Edmunston to Moncton, N.B. The RAILINERS will be handled at the rear of conventional trains between Montréal and Charny, Qué., in the same manner as Montréal-Québec RAILINERS nos. 633 & 634. During the peak summer travel period in 1970, the CHALEUR will be restored as a special, separate train and two (2) SUPER CONTINENTALS will operate from Montréal to Vancouver and Toronto to Vancouver.

LIST OF PASSENGER SERVICE ABANDONMENT APPLICATIONS - Nov. 9, 1969:

Canadian National Railways - 13 applications

Train number (s)	Route	Operating loss during 1968
990	Toronto-Markham, Ont.	\$ 61,785
986-987	Toronto-Guelph, Ont.	114,205
70-72-76-172	Montréal-Chambord-Chicoutimi, Qué.	
183-184-185-186	Chambord-Dolbeau, Qué.	(Total for the three lines:)
176-177	Québec-St-Raymond-Chicoutimi, Qué.	\$ 1,602,176
74-75	Québec-Senneterre-Cochrane, Ont.	
174-175	Senneterre-Noranda-Rouyn, Qué.	(Total for the three lines:)
76-79	(now "combined") Montréal-Hervey, Qué.	\$ 2,829,768
Mxd.260-261	La Tuque-Parent, Qué.	7,901
Mxd.264-265	Parent-Senneterre, Qué.	14,019
87-88	Toronto-North Bay-Kapusking, Ont.	915,114
90-91-92-	Winnipeg-The Pas-Thompson-Churchill, Man.	3,303,343

93		
294-295	Wabowden-Gillam-Churchill, Man.	19,257
692-693-	Edmonton-Camrose-Calgary-Drumheller, Alta.	420,937
694-695		
9-10	Jasper-Prince George-Prince Rupert, B.C.	2,091,345
MXD.297-	McBride-Prince George, B.C.	4,073
298		
611-612-	Moncton-Saint John, N.B.	246,310
613-614		
	Total operating loss in 1968.....	\$ 11,630,233

## CP RAIL - 18 applications:

1-2	Montréal-Toronto-Vancouver, B.C.	\$ 11,630,233
11-12		
1-2-3-4-5-	Dominion Atlantic Railway	317,100
6-7-8	Halifax-Yarmouth, N.S.	
41-42	Montréal-Saint John, N.B.	2,145,100
149-151-152-	Montréal-Québec, Qué.	1,905,600
153-154-155-		
156		
201-206	Montréal-Sherbrooke-Mégantic, Qué.	437,000
167-164-	Montréal-Mont Laurier, Qué.	159,500
174		
131-132-	Montréal-Lachute-Ottawa, Canada	727,800
133-134-		
137-138		
232-233-	Montréal-Vankleek Hill-Ottawa, Canada	1,054,800
234-235		
380-381-	Toronto-Peterborough-Havelock, Ont.	414,900
382-383		
302-306-	Toronto-Owen Sound, Ont.	109,200
307		
321-322	Toronto-Hamilton, Ont.	334,900
337-338	Toronto-Windsor, Ont.	829,000
417-418	Sudbury-White River, Ont.	243,400
427-428	Sudbury-Sault Ste. Marie, Ont.	260,800
303-304	Calgary-Edmonton, Alta.	1,088,800
309-310-	Calgary-Lethbridge, Alta.	202,300
311-312		
307-308	Lethbridge-Medicine Hat, Alta.	169,800
1-2	Esquimault & Nanaimo Railway	139,800
	Victoria-Courtenay, B.C.	
	Total operating loss in 1968.....	\$30,090,700

Combined CN & CP RAIL losses in 1968..... \$ 41,720,933

Operating losses on the Montréal-Hervey, Montréal-Sherbrooke, Toronto-Peterborough, Toronto-Windsor and Calgary Edmonton lines are derived from trains operated in 1968. These operations have since been curtailed and the train numbers given are those presently in operation, with the exception of CN's Montréal-Hervey runs.

NOTES FROM SOUTH OF THE INTERNATIONAL BOUNDARY-----  
 Passenger train services continue to "bite the dust" in our neighbour to the south. The Kansas City Southern - Louisiana & Arkansas Trains 1 & 2, the SOUTHERN BELLE, were discontinued November 2, 1969, ending Kansas City-New Orleans, La. passenger train service and making the KCS a "freight only" system.

Union Pacific Railroad's local trains 5 & 6, between Omaha, Nebr. and Los Angeles, Calif., have been discontinued. This service was one of the very few local trains in the western United States and its abandonment application was delayed for nearly two years. The long list of stations in the mandatory notice covered three pages.

The SILVER COMET, Seaboard Coast Line's Richmond, Va.-Atlanta, Ga. train has apparently also been discontinued.

In the November, 1969, issue of CANADIAN RAIL, the Editor transferred ownership of the Western & Atlantic Railway, from Atlanta, Ga. to Chattanooga, Tenn., from the State of Georgia (to whom it rightfully belongs) to the State of Alabama. It is operated under lease by the Louisville & Nashville Railroad. (As if the loss of the GENERAL wasn't enough!) In the same issue, the "place where the passengers used to detrain" in New Orleans, La., was reduced from the status of a TERMINAL to that of a station. The Editor has been suitably admonished.

#### ANOTHER NEW STATION ?? -----

Timetable students and passengers, wondering why they can no longer transfer between CN trains at London, Ont., will find the explanation in the fact that Canadian National has built yet another new station in the "Forest City", the third one in thirty-one years, - a pretty fair average. The latest one has only one useable platform, so that only one train can enter the station at a time. Therefore, passengers can no longer make convenient connections between Windsor and Chatham and Stratford, Kitchener, Guelph and Brampton, or between Sarnia and points west and Woodstock, Brantford and Hamilton, as often as before, although more trains are being operated.

The new station is "in" the ground floor of the new CN Tower building, on the same site as the 1938 station, but the latter's below-track-level concourse has been cut off through the construction of a depressed roadway, encircling the new building. The interim station, which is now being converted to office space (Parkinson's Laws apply to the CN, too!) was connected to the 1938 concourse by a long, covered ramp. At least the station has been maintained in its downtown location!

#### DAYLINERS GALORE AND THE 5.07-----

CP RAIL's Train 191, leaving Montréal's Windsor Station at 1707, on a shuttle commuter run to Montréal West, was converted to a nine-unit DAYLINER train in November, thus dispensing with the use of 8

heavyweight coaches and one member of the crew. Undoubtedly, the fuel cost for the train operation was increased, as the total horsepower available increased from 1500 to 5000.

This train returns to Windsor Street "deadhead" and departs again at 1750 as Train 291 to Vaudreuil, Qué. On Friday evenings, only six cars are operated. There are thus at least 31 RDC DAYLINER units operating out of Montréal, of which 22 are in suburban service.

#### CP RAIL & THE NEW EQUIPMENT -----

Two of the long-awaited CP RAIL "gallery" suburban commuter coaches were delivered in November, 1969, but were returned to Canadian Vickers Limited after testing revealed mechanical faults. They were expected to reappear in mid-December, but were not observed.

MLW-Worthington, Limited, began outshopping the first C-636 road-freight units late in November, 1969.

CP RAIL announced the placing of an order for six 2000 hp. road-switcher units from General Motors Diesel Limited in London, Ont. Delivery is expected to begin in May, 1970 and the price tag is \$ 1.8 million.

CP RAIL has also ordered 400 covered hopper cars from Marine Industries, Limited, of Sorel, Qué.

#### CANADIAN NATIONAL GOES SHOPPING-----

National Steel Car Corporation has received a \$ 10 million order for 500 box cars from Canadian National. Delivery will begin in January, 1970 and continue at the rate of 10-12 cars a day until the order is completed in March.

It is reported that CN will soon announce an order for 3600 hp. diesel road-freight units from MLW-Worthington Limited. They will be numbered in the 2300 series.

#### AND SELLS A FEW THINGS-----

CN recently offered for sale by tender the car ferry S.S. PRINCE EDWARD ISLAND. Tenders closed on December 12, 1969. The vessel was built in 1915 by Armstrong Whitworth & Co., Limited, Newcastle-on-Tyne, England and provided the first reliable, year-around service between Prince Edward Island and the rest of Canada. After she was placed in service, the Island's railways were gradually converted from the original 3 feet 6 inch-gauge to standard gauge. The job was completed in 1929 and another ferry, the S.S. CHARLOTTE-TOWN joined the service, operating until 1941, when she sank in a storm off Nova Scotia while returning from a refit. The Canso Strait ferry S.S. SCOTIA II helped out until 1947, when the new diesel-powered ferry M.V. ABEGWEIT entered service.

The S.S. PRINCE EDWARD ISLAND was retired late in 1968, when she was replaced by the new M.V. JOHN HAMILTON GRAY. Since then, she has been tied up at Charlottetown, awaiting disposal. The wheelhouse and its contents have been



donated to the Museum of Science and Technology at Ottawa. Two other vessels are used in the ferry service to and from the Island. M.V. CONFEDERATION joined the service in 1964 and M.V. LUCY MAUD MONTGOMERY in 1969, but these vessels carry road vehicles and passengers only.

The S.S. PRINCE EDWARD ISLAND was 300 feet long, 52 feet wide and had a displacement of 1,109 tons and a gross tonnage (by cubic measurement) of 2,794.8 tons. There were two tracks on the railway deck with space for twelve 40-foot freight cars or six passenger-train cars. The track deck was floored for road vehicles and about 50 automobiles were carried on the upper deck. She was one of the last four-funneled vessels in Canadian service. The S.S. LANSLOWNE, CN's Detroit River sidewheeler, is also a four-stacker.

#### A NEW DESIGN FOR AN OLD DESIGN-----

The European headquarters of Canadian National Railways, not far from London's famous Trafalgar Square, is to be renovated in the near future. Built by the Grand Trunk Railway in the early 1900's, the building served as that Company's head office, when the G.T.R. was operated by the London Board of Directors. While the essential quality of the building will be retained, changes will include the provision of first-class office space, updated lighting, heating and air-conditioning, new furnishings, floor coverings and draperies. On the ground floor, the main entrance and the Canadian Government Travel Bureau office will be redesigned and CN's identification with the building will be emphasized.

#### PIGGYBACK IN P.E.I. -----

Canadian National instituted "Plan 2" piggyback service between Prince Edward Island points and central Canadian cities early in November, 1969. It is hoped, by this method, to increase freight traffic to and from the Island communities. Is it only a coincidence that Plan 2 Piggyback went in just after Plan 0 passenger service went out?

#### CANADIAN PACIFIC-ONE MORE WAY TO SERVE -----

From a recent issue of the Canada Gazette: "Notice is hereby given that Canadian Pacific Railway Company will apply to the Parliament of Canada, at the present, next or following ensuing session thereof for an Act authorizing it to purchase the railway freight switching undertaking of the Cornwall Street Railway, Light and Power Company, Limited, situate in and near the City of Cornwall in the Province of Ontario. Dated at Montréal, this 17th. day of November, 1969. T.F. Turner, Secretary."

The Cornwall Street Railway, Light and Power Company, usually known as the "C.S.R.", operates one of the last two common-carrier electric switching operations in Canada. The line is a belt line, beginning at the plant of Cortaulds, Limited, in the City's east end. It runs northwestward to the old CN main line and, turning southwest, crosses the Cornwall Branch of CP RAIL at grade, with an in-



terchange. Following the CN's old main line southwest (some CN trackage is electrified) the belt line reaches the "west end", where a network of tracks serve the DOMTAR Paper Limited plant, as well as a number of smaller industries, some of which use by-products from the paper mill. Turning southeast, the electric line follows Cumberland Street to Water Street and the banks of the old Cornwall Canal and the St. Lawrence River. The track leads to the former plant of the Canadian Cottons, Limited, now used for warehousing and light manufacturing and to the C.S.R.'s main shops. Usually, 8 locomotives are maintained and there is a motor-flat / wing-plow (ex Montreal Tramways Company no. 3052) and two former Ottawa Transportation Commission sweepers. Welding Car no. 4 is former passenger car no. 29. Streetcar service ended in 1948, but the Company operates trolley coaches and motor buses. The Company was once well-known as a repository for second-hand streetcars and its electric locomotives have continued the tradition, some of them being third or even fourth-hand! Several were purchased from the Grand River Railway and the Lake Erie and Northern Railway when CP RAIL replaced electric operation with diesel power on those central Ontario lines.

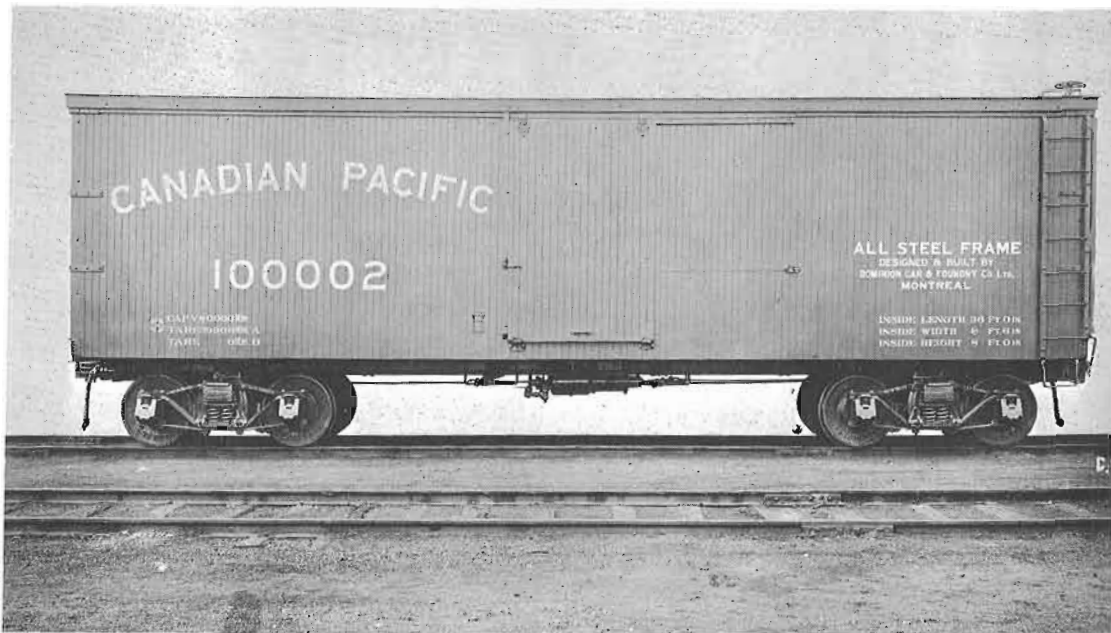
#### ONTARIO'S GET UP & "GO" HAS GOT UP & WENT -----

On November 26th., 1969, Premier Robarts of Ontario announced that three GO TRANSIT demonstration projects would be set up by the mid-1970's, to provide express bus extensions for the present GO TRANSIT rail line between Pickering and Oakville, Ontario, and "mini-buses" to furnish collector service in certain areas. Express buses would connect with each GO TRANSIT train at Oakville for Bronté, Burlington & Hamilton, and at Pickering for Ajax, Whitby and Oshawa. To the north, three commuter trains would be chartered from CN for morning and evening rush-hour service between Toronto and Richmond Hill. Express buses would provide service at other times and will also provide service between Richmond Hill and other communities, connecting with the trains. The Government of Ontario will not itself run the buses, but will finance Gray Coach Lines to provide the necessary equipment and service. Gray Coach Lines is a subsidiary of the Toronto Transit Commission, operating local and inter-city buses in the Toronto area.

With the announcement of this plan, extension of GO TRANSIT rail services east and north seems unlikely.



FROM THE ASSOCIATIONS ARCHIVES



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