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newsletter

Upper Canada Railway Society



February 1973 • 90c



newsletter

Number 325, February 1973.

Upper Canada Railway Society



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RAILWAY NEWS AND COMMENT

CP RAIL CHOOSES NEW SITE FOR GARBAGE-HAULING SCHEME

CP Rail has applied to the Ontario Ministry of the Environment for authority to operate a massive land-fill project on its Toronto-Bellefonte main line north of Wesleyville, Ontario, 55 miles east of Toronto. This site would be used to deposit 400,000 tons of Metro Toronto garbage a year for 15 years. This new location was chosen after the original site near Harriston in Minto Township northwest of Toronto was ruled out after heavy opposition from residents of the area. CP Rail hopes to enter into a long-term garbage disposal agreement with Metro Toronto.

CP Rail Eastern Region vice-president L. R. Smith said that the 450-acre site would eventually become a conservation area, public park or a golf course. He said that the railway intended to make the site a demonstration project. "We intend to open a public observation deck and an information centre for visitors."

CP Rail has offered to join the Province of Ontario in placing a waste management research centre at the site. Representatives have also met with Ontario Hydro officials to discuss the use of combustible waste as a fuel to generate energy.

The railway is required to make four separate applications to the province concerning the rail haul of garbage and the operation of the disposal site. The applications deal with the rail haul, establishment of each individual truck-rail transfer stations and the operation of the disposal site. A public hearing on each application will be held by the Environmental Hearing Board before approval is given.

For an efficient rail haul garbage system, CP Rail says that a landfill site has to be within 200 miles of the source of the garbage production. The site under study will be capable of handling one-quarter of Metro's garbage over a 30-year period. The railway estimates that for every 100,000 tons of solid refuse processed each year over a 15-year period about 50 acres is needed. More than 150 potential disposal sites have been examined.

CP Rail plans to use a 30-car unit train hauling about 2000 tons of garbage daily. The garbage will be carried in specially-designed covered hopper cars. The cars will be loaded through roof hatches at an enclosed transfer station and unloaded at the landfill site through side doors by a crawler tractor. The refuse, as it is dumped, will be spread in two-foot layers. Successive two-foot layers will be added and compacted until a height of eight feet is reached. At the end of each day's operation, the refuse will be covered with one foot of compacted earth. The top section of each landfill section will have a minimum covering of three feet of compacted earth. Up to ten feet of earth will be excavated before any garbage is dumped.

Garbage to be accepted for transport to the disposal site will include standard household waste, rubbish including barrels, furniture, paper and tree branches, metals, glass, crockery and dirt. Also scheduled for rail haul will be street refuse including leaves, content of litter receptacles and waste from alleys and vacant lots.

Under the terms of any agreement to be negotiated, Metro Toronto retains the right to increase the quantity of garbage to be rail hauled. This could reach a maximum of

700,000 tons yearly. Metro intends to also negotiate the rail haul and disposal of up to 100,000 tons of sewage sludge yearly. CP Rail would be expected to have the disposal site and rail haul system in operation within 18 months of signing a contract.

CP Rail officials are meeting with municipal representatives of Hope Township where the site is located, to outline the plan. Area opposition to the plan is expected to be vociferous.

CN FORMS COMPANY TO PLAN ROUTES TO RESOURCES

Canadian National has formed a new company to help meet the challenge of delivering the massive amounts of material needed in future resource development projects across the country. Dr. R. A. Bandeen is the first Chairman of the Board of CANALOG Consultants Ltd., a CN subsidiary. Although initially aimed at natural resource development, CANALOG's capability will be well suited to assist in advising any existing or prospective customer regarding transportation or associated services.

CANALOG Consultants will recommend optimum traffic routing for its customers, negotiate on their behalf for transportation services, monitor and expedite the movement of traffic. The firm will be able to establish, operate or arrange for warehouse facilities or intermediate stockpiling sites.

The new firm's first assignment is to carry out a major logistics study, in conjunction with Canadian Pacific, for Canadian Arctic Gas Study Ltd.--the 25-company consortium planning construction of a natural gas pipeline from the north slope of Alaska and the Mackenzie delta area of Canada to serve Canadian and American markets. The study is a necessary step in planning the \$5-billion project to ensure that the more than 2000 miles of large diameter pipe and associated material can be delivered when and where it is required.

Head office of the new company is in Edmonton, Alberta. CANALOG president is John Gratwick, vice-president of CN's research and development department. General manager is Peter Cale. Members of the CANALOG Board in addition to Dr. Bandeen and Mr. Gratwick are A. H. Harcourt of Vancouver, senior vice-president; R. E. Lawless of Montreal, vice-president of freight sales; Jack Spicer of Edmonton, vice-president of CN's Mountain Region and Frank Roberts of Montreal, vice-president of CN's St. Lawrence Region. The new company will be able to draw on the managerial and technical resources of CN for specific projects, and, if necessary, will retain such other expert advice as may be required.

The Cover

White clouds of steam indicate that Toronto, Hamilton and Buffalo 4-6-4 501 is working hard at getting a train out from Sunnyside Station on the western outskirts of Toronto on a cold, clear March day in 1954.

(George-Paterson Collection)

NORTHWEST RAIL LINKS URGED

Port installations at Prince Rupert and extension of rail lines into northern British Columbia are among the modes of transportation needed to develop the resources of the Canadian Northwest, according to a study released by the Transport Ministry. It was designed to identify the types of transportation facilities needed to develop northern British Columbia, the Yukon and the Northwest Territories.

Key recommendations of the study are:

- The Federal Government, through the National Harbours Board, proceed with initial development of both a forest products and bulk facility at Prince Rupert if there are reasonable assurances that export traffic originate there when it becomes economically feasible.
- Definite agreements be reached with British Columbia on northern railway development. Such a plan would use the line currently under construction to Dease Lake by British Columbia Railway. Subject to agreement, construction should start on connecting this line with CN's line to Prince Rupert.
- Northern rail links stop at Dease Lake 'for a suitable period' to allow mineral exploration to concentrate in this area.
- Paving of the Alaska Highway between Fort St. John and Fort Nelson be completed in a five-year period.
- Detailed hydrographic work on the Mackenzie River and detailed aerial photography on the highway route down the Mackenzie basin be proceeded with.

The ministry called for investment by both the private and public sector in transportation facilities over the next 15 years to support and stimulate growth in these areas. Concerned governments have been informed of the contents of the study.

* * *

THIRD COAL PORT FOR BRITISH COLUMBIA

The possibility exists that work might start within a year on a new coal-exporting terminal for British Columbia at Britannia Beach that would cost around \$10-million. This location for the coal port was chosen over two other locations (Squamish and Prince Rupert) by Premier David Barrett of British Columbia. In a news conference held in Victoria on January 30, Mr. Barrett released three environmental studies, one by the federal Environment Department, one for the B.C. Railway, the third for the B.C. Government. The federal study favoured Prince Rupert.

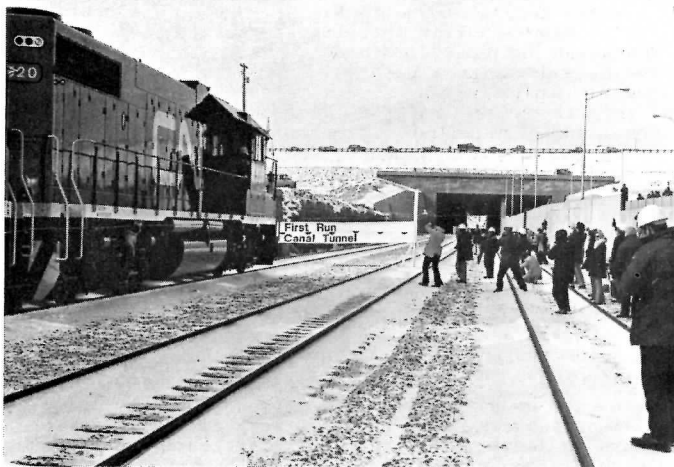
A war of the railways now enters into the situation. The Prince Rupert site, favoured by the federal study, is served by Canadian National. Both sites favoured in the other studies--Squamish, at the head of Howe Sound, and Britannia Beach, ten miles to the south of the sound, are served by British Columbia Railway. Present lines of the two railways are said to be about equidistant from the extensive Sukunka coal deposits in the north-central Rocky Mountain region of British Columbia that would provide all the initial tonnage of the new terminal.

A BCR spokesman said that costs at Squamish and Britannia Beach would be about the same. Britannia is 10 rail miles further south from the coal deposits but has natural deep water and "the environmental objections would definitely be less."

Coalition Coal Co. Ltd., operator and marketing agent for the Sukunka mine, definitely favours the BCR southern route because there is less chance of it being blocked in winter. It also favours the Britannia Beach terminal, "which is an ecological desert in any case." Coalition says it is directing its marketing aims toward selling 40% of its shipments to Japan and 60% to Britain and Europe.

A Prince Rupert terminal would add two days sailing to Europe. A coal terminal is not included in the National Harbours Board plans for Prince Rupert, expected to get underway this spring. A Prince Rupert coal terminal might be able to handle coal more cheaply than at Squamish or Britannia, but not much.

Coalition wants to be able to use big ships in the 100,000 to 120,000-ton range for shipments to Japan, and vessels of about 55,000-tons for Europe.



Shutters click as the lead unit (new GP38-2 5520) of the first CN train to use the Welland Canal Tunnel moves toward the ribbon barrier to officially open the facility. (Canadian National)

WELLAND CANAL RAILWAY TUNNEL OPENED

Railway traffic began moving January 31st through a new tunnel beneath the relocated Welland Canal. The first train through the 1100-foot subterranean passage was a Canadian National fast freight, three units plus fifty cars of priority merchandise from the U.S. on its way to Toronto. CN officers, St. Lawrence Seaway authorities and Mayor A. Pietz took part in a brief ceremony that directed the train over the new route into the tunnel. W. D. Piggott, CN Great Lakes Region vice-president, delivered the train orders to J. W. G. Macdougall, CN executive vice-president, who was in the cab of the lead unit, and the go-ahead signal was given by the mayor with a wave of a trainman's lantern. The participants were decked out in railway garb for the occasion.

The railway tunnel and new track construction are integral parts of the canal relocation project undertaken by the Seaway Authority. In addition to straightening out a nine-mile section of the canal, the project is aimed at removing bridge crossings. Six years in the making, it will provide a faster, safer, more efficient means of navigation for ships travelling between Lake Ontario and Lake Erie. \$190-million is the cost of the entire project, including canal relocation proper, plus railway, highway, and utility changes. The Seaway Authority has borne the cost of the CN railway relocation (\$31-million).

Highlights of the CN portion of the Welland Canal relocation project are the excavation of 67-million cubic yards of soil, a net gain of 28 more miles of permanently-operated main line trackage and five miles of other trackage, 16 more railway-highway crossings, installation of a centralized traffic control of signals over 52 miles of tracks for efficient handling and movement of trains without the construction of still more main and other tracks, a requirement for around 200,000 ties, 350,000 tons of rock ballast, 1.5-million cubic yards of additional fill that was brought in for track subgrade, in addition to the fill taken from the approaches to the tunnel and tunnel excavation. The approach cuts to the tunnel are 2-1/2 miles in length with a 0.75% grade.

Most of the canal relocation work is scheduled for completion in time for the opening of navigation in April.



ACCIDENTS AND DEPAILMENTS

* The water supply of Quatre Milles, Quebec was contaminated by gasoline from three tanks that tumbled from the Canadian National bridge over the Bostonnais River following a derailment of a 100-car freight on December 26, 1972. Explosion and fire tore through other cars that left the rails. 60 cars were removed although several tank cars filled with gasoline and propane were still on the bridge. Cause of the accident is unknown.

* Half a mile of track was ripped up and the two diesel units and eleven cars of the westbound CN Rapido were derailed but remained upright three miles east of Port Hope on the evening of January 5. The train was travelling between 75 and 80 mph when the derailment occurred. 364 passengers aboard escaped injury. A relief train brought the passengers to Toronto. Cause of the derailment is unknown and under investigation.

* Seven cars of an eastbound CN passenger train, carrying 148 passengers, were derailed near Surrey, British Columbia on January 17. The derailment occurred following a collision between the train and a gravel truck.

* The three diesel units of CN freight #393 (4483/4489/4493) were derailed following a collision with an oil truck at a level crossing five miles north of Portland, Maine on January 29. The resulting fire badly burned the lead diesel unit.

* Five CP Rail crewmen walked away with only cuts and bruises when two CP Rail freight trains sideswiped each other in heavy fog near Cherrywood, Ontario on the evening of February 2. Both diesel units involved were derailed, the unit on the eastbound train catching fire when its fuel tanks were ruptured (8731); the westbound unit rolling on its side into a ditch. Six boxcars were wrecked and ten more taken for inspection.

Cause of the derailment is unknown. A CP Rail spokesman said the setting of a switch at the passing siding apparently was in some way involved, causing one train to sway toward the other.

Trackage was cleared by noon of the following day. CP Rail traffic was diverted via CN's Kingston Sub between Toronto and Port Hope (2 trains eastbound/3 westbound).

* Thirteen freight cars of a CP Rail freight were derailed near Lac Megantic, Quebec on the morning of February 4. No one was injured but several hundred yards of track were torn up. Cause of the derailment has not been determined.

* 25 cars of a 77-car westbound CP Rail freight were derailed east of Chatham, Ontario on the morning of February 17. A number of loaded automobile racks were among the cars derailed. About a quarter mile of track was ripped up in the accident. There were no injuries.

WORK ON CN TRANSCONA DIESEL SHOP ADDITION AHEAD OF SCHEDULE

Spokesmen for Canadian National say that work on a \$3-million addition to the diesel shop at Transcona Yard in Winnipeg is ahead of schedule. They report that the last load of concrete had been poured. The installation of equipment and organization of work areas is still in progress and will continue through mid-1973.

The three-year project was started in 1971. It involves a 56,000-sq.ft. extension to the main shop, including a two-storey section for employee lunch, locker and wash rooms. In addition to this extension, a 5500-sq. ft. load test building--the first of its kind in North America--has been completed adjacent to the main shop. It is equipped with high-capacity silencers to isolate the noise of diesel locomotives running under simulated train operating conditions. A 13,818-sq.ft. section of the new extension has been walled off to provide an area for stripping and cleaning diesel engines, compressors, blowers, as well as smaller engines used on RDC's, mechanical reefers, and steam generators.

Outside trackage serving the expanded shop has been completely revised. Spurs of 8- to 85-lb rail which served the former-north-south locomotive bays were removed and 7,762 feet of 100-lb rail was laid to provide ten access spurs at the east end of the shop as well as other support trackage.

When all of the work is completed later this year, CN officials say the railway will have North America's most modern and efficient repair shop, capable of completely overhauling or rebuilding the largest locomotives in existence.

GRAIN HANDLING SYSTEM MODIFICATIONS FAVOURED

Canada's grain-handling system may not have to be drastically changed, according to D. A. Dever, chairman of the Canada Grains Council. The present country elevator system moved a record 971-million bushels of grain last year--apparently without being extended to its limits.

"Certainly we will have to make changes in the system in view of escalating costs," he told a conference sponsored by the University of Manitoba's centre for transportation studies in Winnipeg on January 31. "It is costing \$25-million a year to operate a grain terminal these days. But the performance last year suggests we should take a look at modifications rather than alterations."

The grains council--a study group supported by 26 farmer organizations--has been appointed by the federal government to make recommendations for improving grain transportation methods. The study is to be completed within five years.

"We want to say something definite by 1975 because this is the year when rail line abandonment is scheduled to take place....By that time, we hope to publish all the facts and advance a solution that will generally satisfy all parties....In this way, we will avoid all the dissension that usually permeates any discussion on rail line abandonment."

Dr. Dever said the council is continuing its study despite the recent withdrawal of the three prairie wheat pools from membership. "We deeply regret their departure, but we are gratified that the pools will continue to participate in our grain handling and transportation commission."

The council is trying to ascertain farmers' views on grain handling through a series of meetings in the West. Council members intend to open a 'very wide dialogue' with farmers to ensure that their ultimate recommendations will be rational. Furthermore, the council may select a specific crop district to be used for experiments in grain-handling methods. "We would go into a specific area and rationalize its grain delivery system....Then we determine how this pilot project would apply to overall changes in the system."

William Janssen, planning director for the Manitoba Department of Agriculture, said he is also fairly satisfied with the existing system. But he said there is no hope of overcoming its problems under the present arrangement of mixed private and public investment in transportation facilities. As it stands rail facilities are being built by two companies, one private and one public. As they operate independently of each other, any proposed rationalization scheme will only lead to a greater degree of insanity, he said. Consequently the most logical solution would be to merge the two railways under public ownership and run the system as a public utility and a direct instrument of national policy. He admitted that nationalization might be unpalatable to some sections of the community. Therefore, as a halfway measure, the railway companies should be permitted to remain in business and Ottawa should take over responsibility for all existing rail trackage and the planning of future lines.

CP RAIL STRINGS TEST SECTION OF CATENARY IN ROCKIES

CP Rail has erected a 1/4-mile length of overhead catenary in one of the toughest spots in Western Canada as the first stage in its continuing study of the feasibility of electrification. The purpose of the test section is twofold. To study the cost and degree of difficulty in erecting catenary under North American mountain conditions; and assess the effects of the severe winter climate on the structure.

Location of the test stretch is Ross Peak, British Columbia. This site was chosen because of its terrain and climatic extremes during winter months. The annual snowfall in the area frequently exceeds 500 inches, and snowslides are common.

Supervising construction of the test section was the British Insulated Calendar Cable Co. of Kirby, England, who also designed the 50-Kv system. The catenary is suspended over a cleared 'second right-of-way' adjacent to the main line. Three types of suspension are being evaluated--type I (steel I-beam uprights with brackets to support the type II (wooden poles with brackets) and type III double wooden poles with transverse I-beam to hold the wire).

Evaluation of the test catenary installation will provide important information to CP Rail's ongoing electrification study. Estimated cost for electrification of the line between Calgary and Vancouver is \$200-million.

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EQUIPMENT NOTES...

CANADIAN NATIONAL EQUIPMENT NOTES

* Canadian National has placed orders valued at \$30.7-million for 1697 freight cars with Hawker Siddeley Canada Ltd., National Steel Car Corp. Ltd. and its own Transcona and Point St. Charles Shops.

Hawker Siddeley has an order for 350 gondola cars for steel service and 400 bulkhead flatcars for pulp service, with delivery between mid-April and mid-August. The cars will be built at H-S' Trenton, Nova Scotia plant.

National Steel Car has an order for 500 newsprint box cars and 47 trailer flat cars with delivery dates between mid-May and the end of July.

CN Transcona Shops in Winnipeg will build 200 bulkhead flatcars for packaged lumber service originating in western Canada and Point St. Charles Shops in Montreal will build 200 flatcars for general service.

CANADIAN NATIONAL MOTIVE POWER NOTES

* Diesel locomotive retirements:

9140 -- GFA-15d -- Oct. 5/72
 9100 -- GFA-15d -- Oct. 10/72
 8147 -- MS-10b -- Oct. 10/72
 9110 -- GFA-15d -- Oct. 30/72
 8126 -- MS-10a -- Oct. 30/72
 8125 -- MS-10a -- Oct. 30/72
 8133 -- MS-10a -- Oct. 30/72
 7913 -- GS-10a -- Nov. 10/72
 8482 -- MS-7b -- Nov. 20/72
 8483 -- MS-7b -- Nov. 20/72
 9028 -- GFA-15b -- Nov. 24/72 derailed, mile 20.7 Tete Jaune Sub, Jasper, Alberta, Nov. 10/72
 8132 -- MS-10a -- Nov. 24/72
 8470 -- MS-7b -- Nov. 24/72
 8478 -- MS-7b -- Nov. 24/72
 8480 -- MS-7b -- Nov. 24/72
 8471 -- MS-7b -- Dec. 19/72
 8476 -- MS-7b -- Dec. 19/72
 9042 -- GFA-15b -- Dec. 22/72
 8472 -- MS-7b -- Dec. 27/72 sold to Vancouver Wharves Ltd., Vancouver, B.C.; renumbered to 84.

* GF-17 rebuilt units outshopped from Transcona:

New Road Number	Old Road Number	Date
9157 (GFA-17a)	9064	Oct. 17/72
9158 (GFA-17a)	9080	Nov. 17/72
9159 (GFA-17a)	9038	Dec. 20/72
9160 (GFA-17a)	9076	Dec. 29/72
9190 (GFB-17a)	9039	Oct. 2/72
9191 (GFB-17a)	9031	Oct. 29/72
9192 (GFB-17a)	9063	Nov. 30/72

* Transfers:

1018, 1024 Prairie (The Pas) to Mountain (Calder) Oct. 12/72
 8618 Great Lakes (Toronto) to St. Lawrence (Montreal) Oct. 14/72
 1392-95 Prairie (Symington) to Great Lakes (Toronto) Oct. 30/72
 8024, 8025 St. Lawrence (Montreal) to Great Lakes (Toronto) Nov. 12/72
 8184 St. Lawrence (Montreal) to Great Lakes (Toronto) Nov. 12/72
 8484 Atlantic (Moncton) to Great Lakes (London) Nov. 12/72
 8227, 8228 Atlantic (Moncton) to Great Lakes (Toronto) Nov. 12/72
 3692, 3693 St. Lawrence (Montreal) to Atlantic (Moncton) Nov. 12/72
 6504, 6506 Mountain (Calder) to Prairie (Symington) Nov. 15/72
 8039, 8040 St. Lawrence (Montreal) to Great Lakes (Spadina) Nov. 15/72
 4137 Great Lakes (Spadina) to GTW (Battle Creek) Nov. 27/72
 8618 St. Lawrence (Montreal) to Atlantic (Moncton) Nov. 28/72
 8191 St. Lawrence (Montreal) to Great Lakes (London) Nov. 30/72
 8221 Atlantic (Moncton) to Great Lakes (Windsor) Dec. 20/72
 4137 GTW (Battle Creek) to Great Lakes (Spadina) Dec. 27/72

* CN units on lease:

-- to Northern Alberta Railway:
 4340 -- on lease Aug. 5/72; returned Dec. 4/72
 4344 -- on lease Oct. 15/72; returned Dec. 24/72
 4150 -- on lease May 10/72; returned Nov. 14/72
 -- to Burlington Northern (Winnipeg):
 4300 -- on lease Sept. 27/72; returned Oct. 1/72
 -- to GO Transit:
 4016/4017 -- on lease Oct. 10/72



Brand-new EMD-built CP Rail SD40-2 5641 sits in the snow outside the diesel shop at St. Luc Yard waiting call for power for train 1/903, December 10, 1972. Running mate is elderly RS3 8427. (Pierre Patenaude)

CP RAIL MOTIVE POWER NOTES

* Leased units returned to service from storage:
 At Winnipeg: B&LE F7 units 722A/728A/721B/725A/727A/712B/716B/718A
 At Alyth: PNC units 137/145
 At St. Luc: PNC units 900/901/116/144.
 * CP Rail has returned leased BAR units 68/71/74/77 to their owner as of December 20/72.
 * GP9 roadswitchers 8647-8658 have been transferred from Alyth to Winnipeg for maintenance.
 * Units 8410/8411/8412/8417/8418/8421/8424 have been transferred from the Prairie Region to the Pacific Region.
 * Summary of foreign motive power currently leased by CP Rail: B&LE F7 A&B units based at Winnipeg--718A/722A/725A/727A/728A/712B/716B/721B
 B&O F7 A&B units based at Winnipeg--4487/4502/4503/4517/4622/4646/5424/5495/5515/5529
 PNC GP7m-9 units based at Alyth--100/104/108/110/111/112/113/114/116/118/121/122/123/124/126/127/130#/135/137/142/144/145/148/150/152/158/162/166
 PNC Alco C424 units based at St. Luc--900/901
 # Note: 130 in Angus.

CP RAIL EQUIPMENT NOTES

* CP Rail has placed a \$4.5-million order with Marine Industries Ltd. of Montreal for 200 highway trailer flat cars. The cars are to handle the railway's continued growth in piggyback traffic. The cars will be built at Marine Industries Ltd.'s Sorel, Quebec plant with delivery scheduled for June and July.



Imagine a steam locomotive in a railroad shop undergoing repair in this day and age. Here's Canadian National 4-8-2 6060 sitting stripped in Point St. Charles Shop in Montreal, undergoing restoration to operating condition. In this view, taken last month, wheels have been removed and the boiler denuded of fittings and appliances, lagging and sheeting, down to the essentials. 6060 will be operational once again by the end of this year. (Canadian National)

CANADIAN NATIONAL LEASED MOTIVE POWER NOTES

* C&O GP9 units on lease to CN:
Assigned to Calder Yard, Mountain Region: [during October] 6026/6030/6037/6045/6192#/6194#/6197/5954#/6183# (5954 and 6183 accepted in exchanged for 6192 and 6194)
Assigned to Montreal Yard, St. Lawrence Region: [during October] 5922/5934/6042/6095 [during November] 5952/6208/6168/6202/6247/6203/6198/6004/6205.

* DM&IR SD units on lease to CN: (All assigned to Symington Yard, Prairie Region)
[SD18s] 177/189/190/192/193 (Oct. 3/72) 179 (Nov. 2/72) 175 (Nov. 20/72)
[SD9s] 111/124/139/162/171 (Oct. 10/72) 153 (Nov. 2/72) 138/144 (Nov. 20/72)

* Leased units returned:
to C&O: 6008 (Nov. 27/72) 6053/6158/5954/6051 (Dec. 14/72) 6143 (Dec. 29/72) 6162/6197 (Dec. 31/72)
to BAR: GP7s 63 (Dec. 1/72) 62 (Dec. 15/72)
to PNC: 143 (ex-QNS&L) 3419 (GP10) both during December.

* Summary of foreign units on lease to CN as of Jan. 22/73:
C&O GP9s: at Calder Yard, Mountain Region: 6026/6027/6030/6033/6037/6045/6048/6050/6140/6150/6151/6153/6157/6161/6166/6169/6170/6179/6183/6186/6189/6196.
at Montreal Yard, St. Lawrence Region: 5922/5952/5973/6004/6035/6036/6038/6042/6054/6060/6070/6077/6095/6154/6168/6178/6193/6198/6202/6203/6205/6208/6247.

PNC: all to Symington Yard, Prairie Region: 969/970/971/3445 (Ex-QNS&L) 120/132/138/143/164/170/171/177

DM&IR: all to Symington Yard, Prairie Region: 111/124/138/139/144/153/162/171/175/177/179/189/190/192/193.

THREE YUGOSLAV EXPORT DIESELS LOST AT SEA

Three Yugoslav export diesel locomotives built by Diesel Division of General Motors of Canada Ltd. now sit on the bottom of the Atlantic Ocean having never turned a wheel in service of the railway which ordered them.

The units were part of a shipment of 16 locomotives on their way to Yugoslavia aboard the West German container ship Rumba. The vessel encountered heavy seas and gale force winds 200 miles southeast of Newfoundland on December 15, 1972.

Half the cargo was in the hold while the remainder was on deck. Part of the hold cargo shifted during the high seas and when it was found impossible to secure the locomotives again the captain ordered the crew to abandon ship. Six of the crew were then transferred to a tug (Smit-Lloyd 103) which had come to the assistance of the Rumba but heavy seas deterred further similar operations. A rescue helicopter from the Canadian Armed Forces later picked the remainder of the crew off the pitching decks.

While under tow toward harbour at St. John's, Newfoundland, three of the locomotives on deck broke loose and were lost over the side (night of December 16). The ship arrived in St. John's on December 18.

The ship and its damaged cargo was moved to Halifax in the middle of January and the damaged locomotives unloaded so that representatives of the owners, the builders and various insuring bodies could better inspect the vessel and cargo.

DIESEL DIVISION GM 1973 PRODUCTION SCHEDULE

The current order of 61 GP38-2s now being delivered to Canadian National are the first units in the 1973 production schedule of Diesel Division, General Motors of Canada Ltd. at its London, Ontario plant. These units will be followed in March by five SD40-2s for Ontario Northland. 20 more SD40-2 units will follow for Quebec North Shore & Labrador, and then ten of the same model for CP Rail.

The second portion of the large Yugoslavian diesel order, 58 G26CW locomotives, is scheduled next and will be followed by three SD40-2s for Algoma Central Railway.

The recently announced order of 50 GP38-2s for Canadian National fills up the fall and winter days with the GO Transit GP40-2 order coming onto the line near year end.

BRIEFLY...

* B.C. Hydro's two new SD38-2s, 382 and 383 were delivered to their owner on December 27, 1972. Delivery was via the Burlington Northern at Sumas. The new units are used on the Fraser Valley line.

MLW DIESEL DOINGS

* MLW Industries has an \$8.1-million order from the State Railways for 20 3000 hp. diesel locomotives. Canadian Export Development Corp. has loaned Greece \$1 million to cover part of the order.

* MLW Industries has an order from Companhia dos Caminhos de Ferro Portugueses for \$7-million worth of diesel locomotives and associated parts. The Portuguese railway received a loan of \$5.9-million from the Export Development Corp. to help pay for the equipment.

* MLW Industries recently outshopped an order of six diesel locomotives for British Columbia Railway. Deliveries were made between the middle of December and the middle of January. BCR's new M420s on order will have the new CN design cab when they are delivered.

* MLW-Worthington may shortly make its first sale of M-line domestic diesels to an American railroad. The Providence & Worcester Railroad has placed an order with MLW-Worthington for two M420TR units, with options to order three more. MLW has supplied the P&W with six used RS units, which will be turned back to MLW as the new units are delivered. One old unit will remain on the roster as a spare when the five M420TRs have been delivered. Delivery on the first two 2000 hp. units will be by spring.

RETIRED RAILWAY CARS TO BE SYDNEY TOURIST DRAW

Five pensioned-off railway cars arrived in Sydney, Nova Scotia on January 4th to join a coal-burning steam locomotive as part of a Cape Breton Development Corporation (Devco) project to contribute to the tourist industry.

The five cars, the oldest of which was built in 1881, were donated to Devco by Canadian National while the steam locomotive, 2-6-0 #42, was loaned by R. C. Tibbetts of Stellarton, Nova Scotia. Devco wants to run the train on part of the tracks operated in conjunction with Cape Breton coal mines.

Car #15035 was built in 1881 for the Midland Railway, which eventually became part of the CN system. It previously served as a passenger car, business car and mobile classroom.

The second oldest car is #83, built in 1899 by the Pullman Co. for the Canadian Northern Railway. Car 7377 was built in 1912 by the Canadian Car & Foundry Co. for Canadian Northern. Coach 4273 was built in 1914 for the Grand Trunk Railway as was baggage car 8537.

The locomotive was built in 1899 by the Schenectady Locomotive Works for the Sydney & Louisbourg Railway and was preserved by Mr. Tibbetts in 1963.

NEW GRAIN CARS TOO HEAVY FOR USE ON SOME RAIL LINES

2000 big grain-carrying covered hopper cars purchased last year by the federal government can travel on only half of the railway tracks in Western Canada, the House of Commons estimates committee was told on January 31.

W. E. Jarvis, coordinator of the industry department's grains group, said that "something less than half the tracks can carry the cars once they are full of grain." The other half cannot take the weight of a full car. He assured the committee, however, that CN and CP Rail can use other grain-carrying cars to move grain from places where the new cars cannot be used.

Alf Gleave (NDP-Saskatoon-Biggar) raised the issue during consideration of purchase of the cars. Despite criticism of the purchase by all parties in the committee, the \$44-million expenditure was approved after 29 minutes of consideration.

At one point, Paul Langlois (Lib-Chicoutimi) asked whether the Liberal government "did the right thing" in buying the cars. "Nobody seems happy with the things. Maybe we can cancel them."

He was informed that about half of the 2000 cars were already in service.

The cars were ordered early last year to help cope with grain shipments to Vancouver following a severe winter that hindered rail shipments through the Rocky Mountains.

CN and CP Rail each are to receive about 1000 cars. Mr. Jarvis revealed that a number of the conditions attached by the government in supplying the cars to the railways have yet to be resolved. An "interim agreement" has been reached, but the question of who will pay depreciation and maintenance costs has yet to be worked out.

GO TRANSIT MOTIVE POWER NOTES

* The Government of Ontario Transit has placed an order for four GP40-2 diesel locomotives with Diesel Division, General Motors of Canada. The new units will be built with the new CN cab design and will be delivered in December in time for the inauguration of GO commuter service to Georgetown. Road numbers will be 9808-11.

* Coming into service in December will be GO trains with a difference--a locomotive at each end. At one end will be one of the new GP40-2s to pull or push the train. At the other, a converted engine that will provide no motive power for the train. GO Transit will be using power cab units similar to the Alco FA power cab units in service on the Long Island Rail Road. GO Transit is acquiring five FP7a cab units from Ontario Northland which will be converted into power control cabs housing an auxiliary diesel generator set to provide AC current for train services. The units (1503/1505/1507/1509/1513) will be retired from service when the new SD40-2s ordered by ONR arrive in the spring. ONR will remove the 567 prime mover, generator and traction motors from each FP7a unit, install new auxiliary diesel generator sets, overhaul the carbody and running gear, and repaint the unit in GO colours.

PASSENGER TRAIN NEWS

* The Canadian Transport Commission has ordered Canadian National and the Ontario Northland Railway to maintain passenger services to remote communities along their lines in Quebec, Ontario, Manitoba, Saskatchewan and British Columbia. The 21 services involved in the decision, announced December 30, have been ruled uneconomic, thus making them eligible for federal subsidies of up to 80% of losses. The services lost some \$12,370,570 in 1970.

The CTC said that the railways should experiment with improving services so that the routes will become more economic. The CTC intends to hold a public inquiry into passenger transportation needs in the region. It wants to design a 'rational and well-planned transportation network' in the mid-Canada region.

In its decision, the CTC said that many of the lines are essential. They serve about 200 communities not accessible by road. Other communities are on lines essential to other points and so should continue to be served.

Referring to experiments to improve service, the CTC said that as this is done, it "may be necessary to require alterations including reductions in the services as presently operated."

"Many of the areas through which the passenger train services in this decision operate today make up the gateway to a vast land where, in the decades ahead, Canada will look in the hope of developing its untapped resources and possible trade routes."

"In this context, the committee places great importance on the development of a rational, well-planned passenger transportation network making the best use of all available models of transportation in this approach to the North."

Canadian National services ordered continued include the following:

-- Quebec: Quebec-Chicoutimi; Chambord-Dolbeau; Montreal-Chambord-Chicoutimi; Montreal-Hervey; Senneterre-Noranda-Rouyn; La Tuque-Parent; Parent-Senneterre.

-- Ontario: Toronto-North Bay-Kapuskasing; Hornepayne-Manitouwadge; Sioux Lookout-Thunder Bay North; Hearst-Nakina.

-- Manitoba: Winnipeg-The Pas-Thompson-Churchill; Flin Flon-Cranberry Portage-Osborne Lake; The Pas-Lynn Lake; Dauphin-Winnipegosis; Wabowden-Gillam-Churchill.

-- Other services: Winnipeg-Thunder Bay; Quebec-Senneterre-Cochrane; Jasper-Prince George-Prince Rupert; McBride-Prince George.

The Nipissing Central Railway Co., wholly owned by the Ontario Northland, must continue service on its line between Swastika and Cochrane.

* Canadian National has announced that Toronto-Montreal Turbotrain service will not commence until June. When service is reintroduced at that time, CN will use three nine-car sets. See Equipment Notes this issue on the first test run of a nine-car Turbo set, and other turbine train news.

MODIFIED CN TURBOTRAIN MAKES FIRST TEST RUN

The first modified nine-car Turbotrain made its first test run on January 25, 1973 when it left Montreal on its way to Brockville, but got as far as Morrisburg when it was returned to Montreal. This is the first in a long series of test runs for the turbine powered trains before they are returned to service between Montreal and Toronto in late spring. CN will use only three nine-car sets.

The equipment displaced from CN service (four power cars and four coach sections) will be leased by United Aircraft to AMTRAK. AMTRAK will place the two four car sets in service in the U.S. Midwest in the Chicago-Milwaukee and Chicago-St. Louis corridors. Two other French built turbine train sets will be used in the service. The UA Turbotrains will receive the same modifications that are now being made on the CN equipment.

AMTRAK is leasing two French RTG turbine train sets from the builder--ANF Frangeco--for two years with an option to purchase. AMTRAK also has a purchase option on an additional eight trainsets. The French RTG is a five-car set, powered by two 1140 hp. Turbomeca gas turbines. It has a speed capability of 125 mph with regular gearing. Each set weighs 496,000 lb. fully loaded. Seating capacity is 304, with comfortable reclining seats and overhead baggage racks available to passengers.

* The federal government should not allow the railways to cut back on passenger train service and should subsidize commuter train services in urban areas like Metropolitan Toronto. These were some of the views expressed at a conference sponsored by the Canadian Brotherhood of Railway, Transport and General Workers in Toronto on January 20, 1973. More than 100 environmentalists, politicians and railway workers attended the meeting.

Donald Nicholson, national vice-president of the sponsoring rail union, said the federal government has a responsibility to ensure that people can move around the country by rail. Instead of allowing railways to drop unprofitable lines, said Nicholson, the government should recognize that trains are 'a socially useful thing.'

Toronto Alderman Karl Jaffary said development of existing rail lines for commuter service makes more sense than the province's plan for push-button public transit service. He was referring to the recently published study on Toronto area commuter rail lines by Dr. Richard Soberman, director of the Metro Toronto Transportation Plan Review.

John Medcof, who has urged the creation of a commuter rail service north of Toronto, called for the creation of a regional transit authority to replace what he called 'the present divided chaos.'

MP Barnett Danson (Lib-York North) told the conference that the federal government should be doing a lot more to provide Metro area commuter trains. "I am not at all satisfied with the rate of progress," he said.

* During the recent holiday period, there was a significant rise in the patronage of CN trains 40 and 41, Ottawa-Toronto, via Brockville. Due to the increased number of people, CN was forced to lease equipment. On December 28, #41 was observed passing through Bellamy, Ontario with a MLW FPA4 on the head end, four CN coaches, and one coach belonging to the Algoma Central. This particular coach was one of the former CP 2200 series and still carried its distinctive maroon coat with gold lettering.

On December 15, 1972, CN train 54, the Bonaventure, was two hours and 15 minutes late arriving in Brockville from Toronto. The train was crowded, consisting of three units and fifteen cars. The delay was caused by several reasons. Approximately 25 minutes was lost at Toronto Union Station as the diesels had not been attached to the train on time. They had to wait for the main line to clear of GO trains and other passenger movements before they could be brought from Spadina. A further 30 minutes was lost at Oshawa, as a CTC-operated crossover switch was frozen. The train was further delayed at Belleville as train crews had booked off, and supervisory personnel had to run the train. These men were cautious and did not attempt to keep the train at its running speeds of between 60 and 90 mph. Additional delay was encountered at the various stops made by the train. There were larger than usual crowds, most of these people stranded motorists who were forced off the highways by inclement weather conditions.

* On December 19, 1972, the Canadian Transport Commission released a 175-page study on the potential for commuter rail service in the Toronto-centred region. The study was prepared by Dr. Richard Soberman, who currently is director of the Centre for Urban and Community Studies at the University of Toronto and director of the Metro Toronto Transportation Plan Review.

The report looks at existing railway lines in the Toronto area and examines them as to the potentialities for commuter rail service. The report suggests that three rail lines offer potentialities for commuter service; that it is "technically feasible" to provide services over the existing facilities, but that implementation will require negotiations between the levels of government.

The report suggests that commuter rush hour rail service be established on a 20-mile route between Toronto Union Station and Richmond Hill, on CN. To provide full time service on this line would cost some \$30.3-million. A three-train rush-hours only service would cost \$11.4-million. There would be stations at York Mills, Finch and Thornlea. This line is looked on as a way of relieving overcrowding on the North Yonge Subway Extension to Finch Ave. when it opens in 1974.

CN's line from Toronto Union Station to Georgetown is estimated as having the highest passenger potential of the three lines studied. The report suggests that a limited three-train rush hour service on this line would cost \$14.5-million. There would be stops at Weston, Rexdale, Malton, Bramalea and Brampton. This line will see GO Transit commuter rail services established by next December.

The next line suggested for commuter rail service has the most expensive costs involved and also is situated on some of the busiest freight trackage in Southern Ontario. The line is CP Rail's line from Streetsville on the west through North Toronto to Malvern on the east. To establish a limited three-train rush hour service on this line would cost \$16.6-million from Malvern, or \$32.2-million from Streetsville. There would be stations within Metro Toronto limits at Islington, Spadina, Summerhill, Leaside, Don Mills, Victoria Park, Agincourt and Malvern. If the service was looped south to Union Station, there would be an additional station at Bloor.

The total capital investment for provision of full service throughout the day on the three routes is estimated at \$94.1-million. Operation of limited commuter service on the three routes probably will involve an operating deficit of 26¢ to 41¢ a seat, with total deficits ranging from \$1 to \$1.54 a seat. For a full service in 1977, operating deficits would range from 33¢ to 84¢ and the total from \$1.85 to \$2.29.

It is estimated that a full service in 1977 would carry 10,200 passengers daily on the Georgetown-Union Station line. The total for the Malvern to Union Station route

is 8000, for the Richmond Hill to Union Station line 7300 and the Streetsville to Union Station route 6800. A strong trend toward increased urban growth east of Metro might make the Malvern route increase in passenger volume. It is recognized that aggressive marketing techniques of the new commuter services will be needed to produce "much stronger incentives" for people to stop using their cars.

In the long term, the Georgetown route which will receive limited GO Transit service in December and the Malvern route appear attractive for full scheduled service similar to the GO Transit Lakeshore service.

The Soberman report will be studied by the Province of Ontario to see whether it is possible to operate any more GO Transit services on the routes recommended. A. T. C. McNab, deputy provincial minister of transportation and communications, said that the report would have to be analysed properly. He added that there would be difficulties in using Metro area railway lines for commuter rail services in some cases because it would cause problems with freight scheduling.

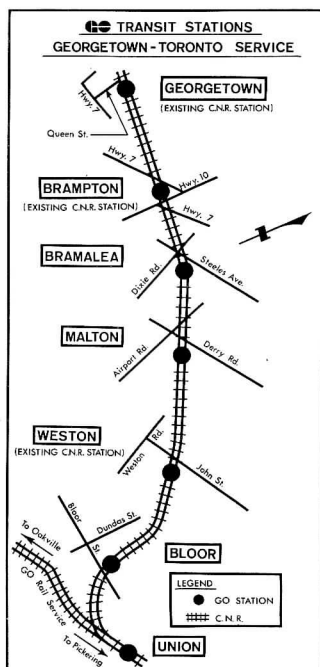
Metro Chairman Albert Campbell said that the report would receive top attention from Metro's transportation and executive committees. He said that commuter rail service has a definite role in Metropolitan Toronto transportation and "we would be providing an alternative to the car." He felt that commuter services could be established and operating long before some other forms of ground transport suggested recently, and that rail services would complement these new forms of transport. Campbell said he liked the proposed line between Streetsville and Malvern.

* Sites have been selected for the six GO stations on the new Georgetown-Toronto commuter rail service. Each of the municipalities involved worked with GO Transit in determining the most appropriate and most acceptable station locations. Detailed design work and negotiations for required property acquisition are well under way.

Startup service on the Georgetown corridor will be limited initially to three morning trips into Toronto and three evening return trips, Monday to Friday. Provision is being made for eventual growth of service frequency.

To permit rush hour service it is necessary to upgrade track and switching and signalling systems; modern lightweight coaches and compatible locomotives (see Equipment Notes this issue) have been ordered; adequate station and parking facilities will be provided.

The final decision on the startup service inauguration may well be dictated by the delivery of the new coaches and locomotives. Best estimates now are that commuters northwest of Toronto will be riding the GO trains by the time next winter sets in.



Here's GO Transit's special train of Ontario Northland Polar Express cars headed by leased Canadian National GP40 4016 (the other unit 4017 is on the other end) in action on a cold winter's day on CN's Kingston Sub near Withrow Avenue in Toronto's east end. (Robbin Rekiel)

* Illinois Central Gulf has increased fares on its electrified Chicago-area commuter trains. Effective February 9, the price of weekly and monthly commutation tickets went up 25%, while 25-ride tickets went up an average of 18%. One-way and round trip tickets were increased 5%.

ICG took the actions to reduce by about 50% its current commuter operating loss, the largest since the line began operation nearly 117 years ago. National wage and price controls in the U.S. proved ineffective in holding the line on commuter operating costs.

* AMTRAK has reported revenues for the second half of 1972 were up 12.6% from the same period in 1971, indicating 'that the historical decline in railroad passenger ridership has been reversed.'

AMTRAK started operations on May 1, 1971. For the calendar year 1972 it reported a net loss of \$147.5-million. Preliminary estimates for the first six months of the current fiscal year--beginning July 1--were for revenues of \$88.1-million and expenses of \$151.1-million, for a net loss of \$63-million. Passenger use of AMTRAK trains from May through September 1972 showed an increase of 10.4% over the comparable period in 1971.

The company's annual report says: "At the end of 1972 the corporation was operating better cars and cleaner cars and was giving the public better service than it was in December a year ago, although we still have a long way to go to achieve what we consider an excellent service." It cites difficulties forcing railways to operate trains on time, preventing overcharges by railways and collecting damages for railway-caused accidents.

* Trustees of the bankrupt Penn Central Transportation Co. have asked a U.S. federal court for allowance to discontinue all passenger service it provides for AMTRAK, to end most of its commuter train service and abandon 5000 miles of track. The trustees said that the abandonment of 5000 miles of trackage would cost the railroad some \$20-million a year while the passenger service it wants to eliminate is a continuing cash drain on the railroad.

The plan includes:

- Abandonment of 5000 miles of line 30 days after notices are posted that the lines are to be closed.
- Discontinuance of all AMTRAK trains--including the Metroliners, all Northeast Corridor service and a long distance service to Chicago and St. Louis--by September 1 unless a new agreement providing for increased payments is negotiated with AMTRAK.
- Discontinuance of all commuter service for which Penn Central is not adequately compensated. This means virtually all commuter service except that in New York City.

In its petition, the railroad said that the service provided AMTRAK is costing the company \$32.5-million a year, and it is losing an additional \$54.7-million on local commuter service. PC lost about \$282-million in 1972.

The chief lawyer for the trustees said that the railroad is not trying to circumvent any laws. He explained that in accepting the line's plan, the court would order passenger services stopped and freight service on the lines to be abandoned while formal legal proceedings took place. This means continued negotiations with AMTRAK. Money-losing freight lines would be operated if states or local communities would pay the costs.

'People First' Transit for Ontario

Ontario Premier William Davis has unveiled a comprehensive "people first" public transit plan for Ontario under which the provincial government will offer grants of 75% of costs to encourage innovation in municipal public transit and to shift emphasis from expressways.

These new subsidies are in addition to increased subsidies brought in during 1971 to provide 50% of the cost of equipment and rolling stock for subways, which previously received received a 50% assistance toward capital costs of construction only; a formula subsidy to provide 50% assistance to meet transit deficits; and 75% subsidy to assist municipal transit studies.

To implement the "New Way To Go--Ontario" plan, the province stands to spend around \$1.135-billion over the next decade.

The new grant offering went into effect on December 1, 1972--eight days after Premier Davis unveiled the detailed proposals for modern transit systems to serve Metropolitan Toronto and the cities of Hamilton and Ottawa at a special news conference held at the Ontario Science Centre. Among those attending the conference were members of the Ontario legislature, representatives of Metro Toronto and other municipalities across Ontario, and transportation experts.

The new plan calls for intermediate-capacity transit systems capable of carrying between ten and twenty thousand people an hour. These new systems would follow a variety of corridors involving railway, power line and highway rights-of-way and city streets. Such systems would be economical and faster to install; they operate on their own guideways either at ground level, or where necessary to avoid traffic congestion, above or below ground. The proposed equipment is attractive in design and much lighter than conventional rail vehicles. Units would electrically powered and supported either on rubber wheels or magnetic or air cushion suspension, giving them the capability of smooth, quiet, comfortable, safe and pollution-free operation. "These new systems could be designed for moving goods as efficiently as people, thus removing some heavy commercial traffic from existing roadways," the Premier explained.

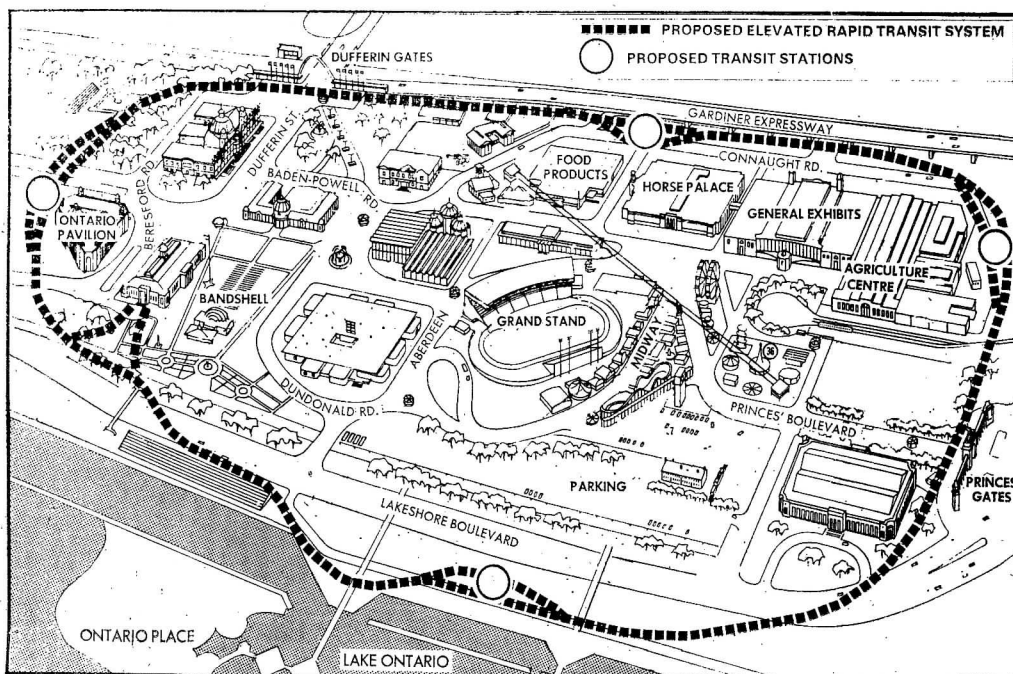
The provincial government plans to build a demonstration of one of the three (now *two*) different innovative systems under consideration by the Ministry of Transportation and Communications, to be in operation in Exhibition Park in Toronto next year.

Premier Davis emphasized that the provincial grants would also apply to smaller urban centres which introduce improved conventional public transit equipment. He went on to outline an overall six-point program that would lead to a variety of transportation facilities which "will put people first." The six-point program includes the following:

- * Subsidies of 75% for the purchase by municipalities of buses, streetcars and trolleycoaches and related facilities.
- * The development at provincial expense of a prototype and operating demonstration of a new form of intermediate capacity rapid transit system together with a subsidy program of 75% to assist municipalities in applying the system to meet their needs.
- * Subsidies for programs to alter demand for transportation at peak times such as the encouragement of flexible working hours to spread peak loads in major cities.
- * Subsidies of 50% to urban areas for upgrading and expanding existing computer-controlled traffic systems and possible introduction of such systems in other major centres, where required.
- * Continuation and expansion of studies in cooperation with municipalities in order to maximize the use of existing roadways through the study of such means as one-way streets, delivery and parking policies.
- * An intensification of provincial efforts and resources devoted to the coordination of transportation planning among the municipalities in Ontario.

The Province's new transportation policy was arrived at after a thorough assessment of all aspects of transportation and its relationship with the urban environment. The new policy is based on the following:

- * Recognition of the need for community-wide transportation systems that provide maximum service and convenience, but which will not depreciate nor destroy community life.
- * Cooperation with the appropriate municipal authorities in the development of alternative transportation facilities appropriate to local needs.
- * Provision of necessary resources, including both technical research and appreciably greater provincial financial assistance for transit services.



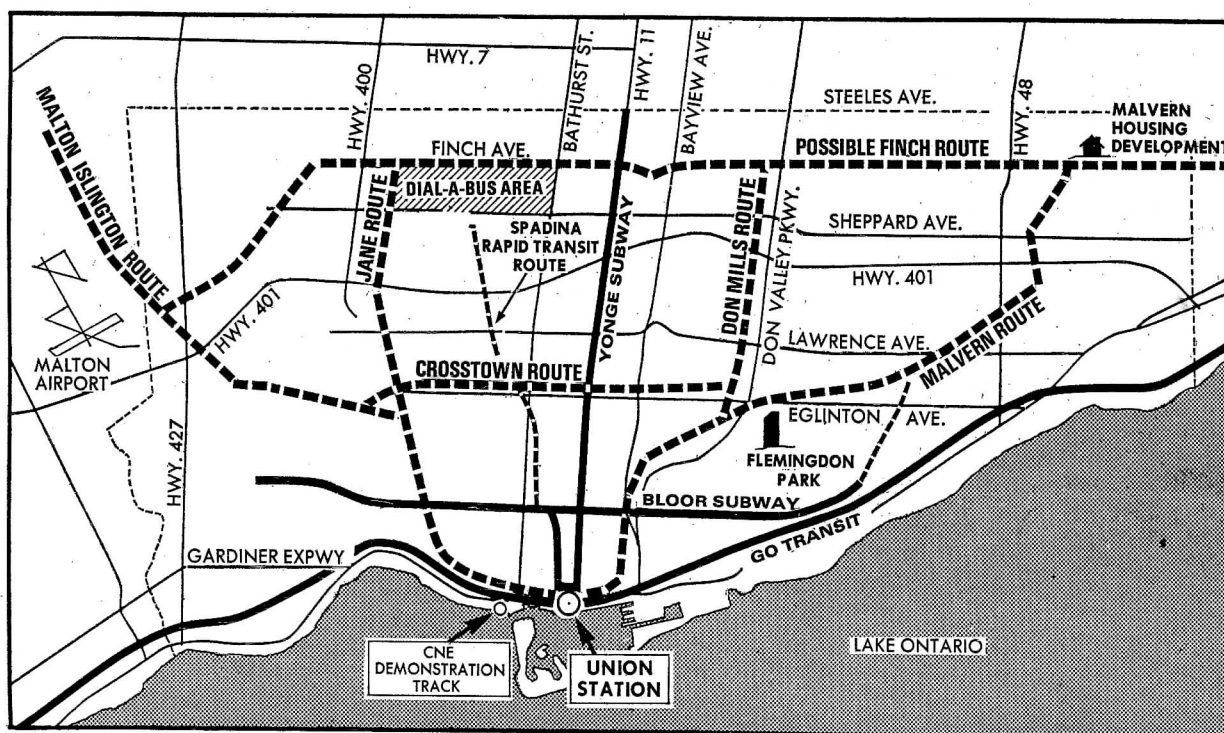
PROPOSED ELEVATED TRANSIT SYSTEM TEST LOOP AT EXHIBITION PARK, TORONTO

Premier Davis invited the Federal Government to participate in the planning, development and financing of Ontario's program. At the same time he posed the possibility that it may be necessary to introduce some form of regional transportation authority to come to grips with the transportation problems of large urban centres. He stressed, "It will need to be a concerted attack. Coordinating the use of roadways with railways, streetcars and buses and perhaps other modes will require the highest degree of cooperation among all agencies in the field. With the cooperation of the municipalities we are certain that we have the opportunity to build a transportation network that will put Ontario foremost in the world in this important field."

The Premier went on to state that rush hour vehicular traffic congestion amounts to about 20 hours a week and it would be impossible to build enough roads for all the rush hour traffic that has been created. While he recognized that the vitality of the city depends on automobiles and commercial vehicles continuing to play key roles in the overall transportation scene, he said the unrestricted use of cars and trucks during these few peak hours when people are going back and forth to work is the critical factor that has been making transportation problems critical.

In introducing proposals for use of the new intermediate capacity rapid transit systems (see maps) for the large urban centres, he said it "would be folly to continue to rely solely on the present-day use of the automobile and our other existing systems of transportation." He acknowledged that expressways as a means of connecting built

PROPOSED INTERMEDIATE CAPACITY SYSTEM FOR METRO TORONTO

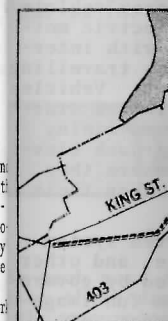


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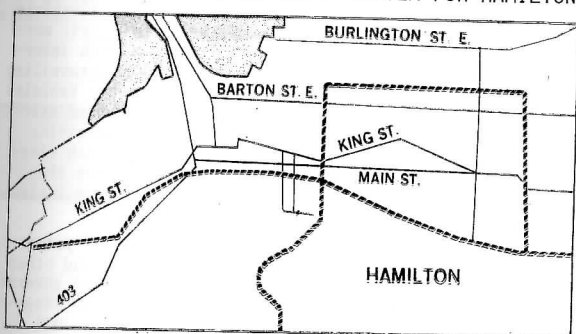
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areas provide transportation, and said such systems will be maintained within the goals of a balanced transportation plan. "However, as a means of solving our urban transportation problems, expressways are not only too expensive for the traffic moved, but because of their accompanying intrusion, noise and air pollution, they have become unacceptable in residential areas."

In the case of small urban areas as well as towns, it is clear that neither subways nor intermediate-capacity transit systems are practical, the Premier said. He added that studies have been completed indicating that express buses, dial-a-buses and similar forms of public transportation can be made viable in many areas. The same offer of provincial assistance for transportation development in the major urban centres will be extended to such communities, and the government would welcome public transportation proposals from them.

"The government's decision...to terminate the building of the Spadina Expressway was a move to sustain our cities on a human scale...It is interesting to note that the decision to halt construction of the Spadina Expressway set a pattern for many similar decisions in other cities around the world." Before the decision was made, the Ministry of Transportation and Communications had a province-wide urban transit study involving 28 munic-

PROPOSED INTERMEDIATE CAPACITY SYSTEM FOR HAMILTON



At the heart of Ontario's new "people first" public transit proposals are new radically different intermediate capacity transit systems utilizing new forms of technology. Systems have been proposed for three Ontario cities --Metropolitan Toronto (five, possibly six routes), Hamilton (three routes) and Ottawa (one route). If adopted, they would have profound implications for development in the three cities.

The electrically-powered intermediate capacity trains, capable of moving between 6000 and 20000 passengers per hour per direction will fill the gap between buses (one route can accommodate a maximum of 6000 passengers per hour) and high capacity subways (capable of moving 40,000 passengers an hour). The cost of building the new transit system is estimated at between \$13 and \$17-million a mile. Hydro rights-of-way form an important integral part of the proposed transit corridors. Not only does their use eliminate much of the cost of acquiring land and destroying housing, but they could provide ample parking facilities for commuters.

Three major companies were invited to submit proposals to build a prototype of the new system, which would involve elevated tracks and automated control for a two-mile loop around Exhibition Park in Toronto. The proposals are due around March 1, with a government decision sometime in April. The prototype would be expected to be operational late in 1974, followed by a year of testing and evaluation. Target date for completion of the first urban route is 1977.

The three bidders for the CNE prototype contract were originally the Ford Motor Co., Hawker Siddeley Canada Ltd., and Krauss-Maffei AG. Since then Ford has withdrawn its bid as its system could not meet the speed and capacity requirements of the Ministry of Transportation and Communications without making major changes in the system that Ford has developed. The firm that wins the CNE contract will not necessarily win the full-route contract, but MofT&C officials concede it would "have a good head start" over its rivals.

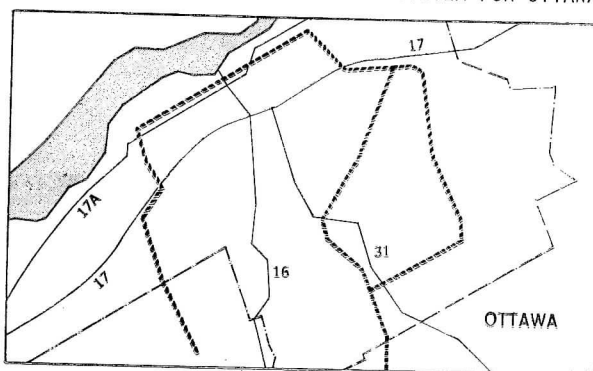
Although the proposed intermediate capacity transit systems can operated at ground level, or even underground, they are specifically designed for elevated guideways.

ipalities well underway. With financial and technical assistance from the Province, this program has led to the establishment of new and improved systems in Sudbury, North Bay, Thunder Bay, Oakville, Kingston and Stratford. The municipalities of Markham, Richmond Hill and Vaughan have also undertaken studies.

In singling out GO Transit's rail-bus commuter service as an outstanding example of an alternative approach to auto commuting, Davis credited it with pioneering the first dial-a-bus service in the world. Its success has resulted in implementation of similar services in Kingston and Stratford. "The future of dial-a-bus looks bright and the Ministry of Transportation and Communications fully expects to be involved in the implementation of further systems in Ontario." Possible locations for further demonstrations are the Downsview area in North York Borough, parts of Willowdale and northern Scarborough, and Nepean and North Gloucester in Ottawa.

Davis has invited the municipal governments of Toronto, Hamilton and Ottawa and their transit authorities to study the proposals, evaluate them in light of their needs and come back to the provincial government with their comments on alternative proposals. "My government has set as one of its highest priorities the full cooperation with municipalities to provide the best possible systems of urban transportation."

PROPOSED INTERMEDIATE CAPACITY SYSTEM FOR OTTAWA



Lightweight vehicles permit guideway structures of modest proportions and near-elimination of noise generators in the vehicles permits the guideways to penetrate areas that would be prohibited to conventional vehicles on elevated tracks. Actual width of the guideway structure will not be determined until a particular design is chosen, but it may be as narrow as four or five feet. It is expected to be supported on slender columns about 16' high spaced 60 to 100' apart. Stations, too, will be elevated in most cases, and may even be incorporated into the second level of major commercial buildings. Boarding platforms will resemble elevator lobbies, with passengers boarding through sliding, elevator-type doors which will open only when there is a vehicle ready to receive them.

An elevated guideway is less demanding in terms of land use than any other types of transportation corridor. It requires only a few square feet of land every 100 feet or so on which to place footings. Thus it can easily be constructed over existing rights-of-way, such as hydro or rail lines. In non-urbanized areas, "linear parks" similar to those already established under the BART system of San Francisco could be developed along the route. Guideway sections and possibly support pillars will be largely prefabricated of concrete and steel, and erected on site in a matter of days, drastically reducing costs.

The 56-mile proposed transit network and its computers will someday--in the relatively distant future, perhaps--let passengers 'interact' with the transportation system 'positively'--whatever that may mean. It seems to mean that passengers entering one of the 72 proposed stations will not encounter either ticket collectors or train operators. There won't be any. During peak hours, there may be as many as 20 passengers to a car. In off hours, a passenger may well ride in solitary splendor. He will carry a long-term ticket resembling a credit card, magnetically coded with name and address. He'll shove it in the turnstile, and be billed at the end of the month. To summon transportation, he will press one button, plus another to let the vehicle know where he wants to go. A flashing information board may tell him how long he will have to wait, and which gate to enter by.

Automated transit systems are not new. Ontario's proposed system extends automatic controls to include virtually every aspect of the operation. Computers will control the movement of every vehicle within the system, with trains or individual cars running at closer intervals than would be possible under human control. In addition, all vital components will be designed to be fail-safe. Computers and electronic sensing devices will monitor the entire system, and faulty components will be replaced before they fail. Because an automatically-controlled transit grid is not labour-intensive, it will be economically feasible to extend frequent service into off-peak hours.

However proud they may be of their conception of an almost-totally automated transit scheme, government officials warn the first medium capacity transit lines "might not reflect this very high degree of sophistication." However, the potential for growth into an automated system will be built in, and the advanced techniques will be incorporated as they are refined and developed.

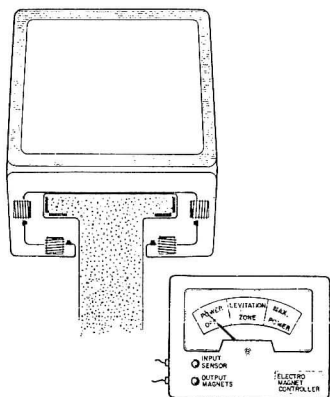
Of the schemes being studied, one floats on electromagnets with no wheels and is propelled by a linear induction motor (Krauss-Maffei AG), and the other is supported by rubber-tired wheels, but propelled by a linear induction motor (Hawker-Siddeley). The Ford system is both supported and propelled by rubber-tired wheels powered by standard electric motors.

The provincial government is rumoured to lean toward the fancy, wheel-less gadget, capable of speeds up to 95 miles an hour. Premier Davis was reportedly ecstatic about it after his ride around the test track in Munich.

Neither new in concept nor extraordinary in principle, the linear induction motor (LIM) was first proposed in 1895, and is little different in theory from an ordinary electric motor. It has been only in the past decade that the LIM has been actively developed as a device to propel transit vehicles.

As in the standard electric motor, there are two parts, the primary, containing the coil windings required to produce a magnetic field, and the secondary, which is basically a block of metal reacting to the primary field. In a standard motor, the secondary turns a shaft. In the LIM, the secondary is a flat plate, and a linear force is exerted between the separate parts, one attached to the bottom of a vehicle, the other fixed to a guideway. Basically an ordinary electric motor rolled out flat as an open-faced sandwich. Because the secondary can't move, the primary has to, and off goes the train.

NO POWER-VEHICLE AT REST



No power is supplied to the magnets when the vehicle is stopped in a station. The vehicle thus rests firmly on its guideway to ensure a stable platform for boarding passengers.

Should the power to the magnets be interrupted for any reason while the vehicle was underway, the vehicle would simply settle down onto specially-designed brake pads or skids and come to a safe, smooth stop. Transit vehicles will be equipped with an emergency power supply to take passengers to the next station.

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Because neither of these basic parts contain anything which moves, and because the parts do not physically touch each other, the LIM can be described as 'without moving parts.' This results in a propelling power source that produces virtually no noise and requires exceptionally little maintenance. The LIM's thrust can be very precisely controlled to provide easily varied operating speeds and acceptable acceleration rates. In addition, its thrust can be reversed to provide braking force, independent of surface conditions on the guideway--a major advantage for winter use in Ontario.

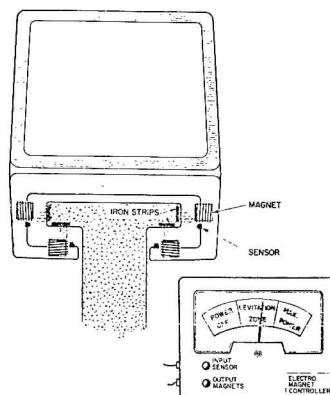
In the Hawker Siddeley transit proposal, vehicles with a capacity of 20 passengers are supported on rubber tires on their own track, and propelled by linear induction motors. Lateral guidance and steering are achieved through horizontal rubber tires running along guide rails. The track is U-shaped, with partially open sides. Because of the linear induction propulsion, which does not drive through the suspension tires, there is no reliance on wheel-track friction for acceleration or braking. Switching is achieved by an on-vehicle switch, and an automatic control system manages the entire operation, including vehicle speed, spacing, safety, routing and scheduling.

The Ford system is the closest of all to the standard transit concept. It consists of a 24-passenger vehicle running on rubber tires driven by a quiet electric motor. The company claims the cars can be run with intervals as short as two seconds between vehicles travelling at 30 mph, because all control is by computer. Vehicles can be programmed to stop at a siding at selected stations while non-stop cars bypass them on the adjoining line. All passengers will have to do is approach elevator-like doors, press a button indicating where they want to go, then wait for the doors to open when their car arrives.

The LIM-powered, electromagnetically-supported system offered by Krauss-Maffei AG is the 'fun' one, and other things being more or less equal is considered by government sources most likely to get the nod from fun image projecting Premier Davis. In fact they suggest, all other things might not necessarily have to be equal.

While the concept of wheel-less trains floating on a frictionless electromagnetic field is innovative, the company itself has a solid 130-year background in the building of railway locomotives and rolling stock. Associated with K-M on the automatic control and propulsion systems are several other well-established firms with long experience in these fields.

POWER ON-VEHICLE LEVITATES



Power to the electromagnets is carefully controlled to balance the opposing forces of gravity and magnetism. When the upward pull of magnetism equals the downward pull of gravity, the vehicle 'floats' on a frictionless magnetic field without touching the guideway. Contact-free lateral guidance is provided by a similar technique which balances the magnetic forces pulling the vehicle to each side.

It is only with the use of electromagnets attached to the vehicle and attracted upward to a special track. There is no difficulty in measuring the distance between the iron strips. The current flow to the magnets increases if the sensor control between vehicle and track is millimeters at a time. In effect, the vehicle is in a constant state of adjustment, but it is not a vehicle in motion. The vehicle is in a constant state of adjustment, but it is not a vehicle in motion. The vehicle is in a constant state of adjustment, but it is not a vehicle in motion.

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Editing
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It is only within the past few years that practical methods of using electromagnets to provide frictionless support to transit vehicles have been devised. When electromagnets attached to the vehicle are powered, they are attracted upward toward iron strips laid down along a special track. The strength of the attraction is a function of the amount of electricity applied to the magnets. There is no difficulty in lifting a fully-loaded vehicle the short distance required. Automatic sensors continually measure the distance between the magnet face and the iron strips of the guideway. They relay the information to an electronic control device which reduces the current flow to the magnets if they get too close, and increases it if they move too far away. Response of the sensor control system is so rapid that the clearance between vehicle and guideway is maintained within a few millimeters at all times.

In effect, the vehicle floats free of contact with the guideway, but tied to it by the balanced forces of magnetism and gravity. The system is fail-safe, because the vehicle is mechanically keyed to the track to prevent derailment, and simply comes to rest on specially designed brake skids if the power goes off. There will be an emergency power system aboard to take passengers as far as the next station.

TRACTION TOPICS

Edited by Michael W. Roschlau.

* So much news is coming out of the Toronto Transit Commission these days, that we are hard-pressed to keep ahead in the reporting of it. However, we will try our best.

On January 17, 1973, Scarborough Controller Karl Mallette and North York Controller Paul Godfrey were sworn in as new TTC commissioners, having been appointed to the posts a week earlier by Metro Council. Both men were in favour of the single-zone fare proposal for Metropolitan Toronto.

The single-zone fare proposal came before the commission on January 16, and by a 3-1 vote the proposal was approved. The new fare system came into effect at 5 a.m. on Monday, January 22. TTC riders are now able to travel anywhere in Metropolitan Toronto on subways, streetcars and buses for one fare; four tickets or tokens for \$1, or 30¢ cash. As a result of the single fare, the TTC has predicted an increase of approximately \$8-million on top of the already forecast deficit of \$15-million for 1973. TTC Chairman Frank Young said that the single fare may force the commission to increase fares sooner than would otherwise be necessary; possibly by next fall.

Some changes were introduced at the Warden and Islington subway terminals because of the single fare. One new set of turnstiles, gates and ticket booths have been installed and two removed to allow bus passengers to connect directly with the subway and to collect fares from passengers coming from other outside entrances previously being connected with the bus platforms. The ticket-activated turnstiles at these stations have also been removed.

There has been a noticeable increase in ridership, and the TTC still has hopes of covering the \$8-million expected loss on account of the single zone. Toronto Mayor David Crombie states, however, that the Ontario Government has an obligation to subsidize the expected TTC losses resulting from the single fare system. The money will eventually come either from the fare box, Metro Toronto, or the province.

New TTC commissioner Karl Mallette has some other suggestions for the commission's consideration:

- do away with tickets and tokens in favour of an exact change, cash only fare system;
- convert all streetcar and subway trackage to the same gauge as railways;
- install temporary streetcar track on Bathurst Street north of St. Clair Avenue to provide a tentative intermediate rapid transit line while the Spadina Subway is under construction;
- review the TTC policy of providing commissioners with chauffeur-driven cars.

The magnetic vehicle support is silent and vibration-free, little affected by adverse weather conditions, or guideway irregularities. Mechanically simple, it has no moving parts in the usual sense and no contact between vehicle and guideway except when stopped in the station. There it rests firmly on the guideway to provide a stable boarding platform for passengers.

In operation, when the train is 'levitating' with the upward pull of the magnets equally the downward pull of gravity, the vehicle floats on a frictionless magnetic field. Contact-free lateral guidance is provided by a similar electromagnetic system operating against the centre of the rail, with magnetic forces balancing those tending to pull the vehicle from side to side.

The Krauss-Maffei vehicles have a capacity of 20 passengers, propelled by LIMs. The track is equipped with the magnetic armature rails and the secondary of the LIM. Switching is effected by magnet control and requires no moving parts in either track or vehicle. Automatic command and control systems perform functions similar to those in the Ford and Hawker-Siddeley designs.

Common to all systems is the ability to operate at speeds of up to 50 mph, either singly, or entrained, and all should be able to deliver substantial line capacities because of the control design of short-spacing between vehicles. At the same time, because of control and switching capabilities, they will have the potential for providing more convenient, almost personalized service at off-peak hours.

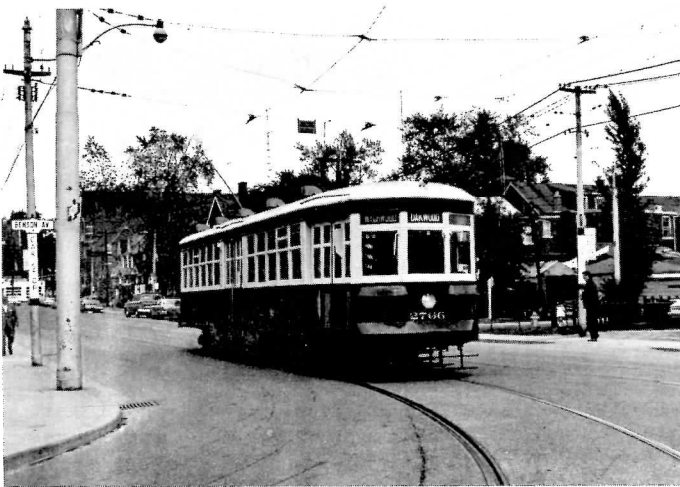
* All TTC vehicles were operating free of charge from 8 p.m. on New Year's Eve to 4 a.m. on New Year's Day, courtesy of McGuinness Distillers Ltd. The cost to the distillery was \$30,000 for the eight-hour period. This is the second time that this has been done; the T. Eaton Co. rented the TTC system for two hours on July 29th, a Thursday morning.

The increased use on New Year's Eve was 474% over Christmas Eve; the first-ever eight-hour rush hour on a Sunday witnessed by riders. After the subway system and the many surface routes closed down around 2:45 a.m., there were still hordes of rollicking folks trying to board vehicles which were out of service. TTC station attendants had the time of their life trying to get patrons out of the subway stations after the last train had left, and the night bus--well, that was another story.

* Renovations to the King Street subway station were completed and the new Melinda Street entrance opened on December 15, 1972. The new entrance connects the subway station directly with the Commerce Court underground shopping mall. There is only one problem--the installation of the escalators has not been completed as yet due to a strike by elevator technicians.

The TTC has also announced that the North Yonge Subway Extension to York Mills will be opened on Saturday, March 31, 1973, without operational escalators on account of this technicians' strike. This means that some passengers will have to climb as many as 90 steps to reach the ground level. However, most people will probably not mind because they can get downtown 10-15 minutes faster.

- * The TTC's proposed Capital Budget for 1973 includes a number of interesting projects:
 - rebuilding of the shelter at Long Branch Loop;
 - Greenwood Yard electrolysis communication and signal cable study;
 - modification of the signal system on the Yonge Subway;
 - provision of an alarm system for subway collectors' booths;
 - Humber Bridge electrolysis study;
 - two-way radio study for buses on electronic surveillance and schedule control;
 - the refurbishing of a further 75 PCC cars during 1973 (in addition to the 50 done in 1972) at a cost of \$1.45-million;
 - the following surface track replacements: College/Carlton - Bay to Ontario, Sheridan to Dundas; Church - Dundas to Queen; Gerrard - west of Carlaw to Pape; King W. - Sudbury to Atlantic, Close to east of Wilson; Queen - Broadview to Empire; Victoria - Adelaide to Richmond, Queen to Dundas; York - Wellington to Queen; Richmond - Church to York; Coxwell - Upper Gerrard to Lower Gerrard; Mount Pleasant Road - Eglinton to Davisville;
 - Yonge Subway track replacement at: north end of Heath Curve; Imperial Curve; Rosedale Station; south of Davisville Station; Ellis Portal northbound; Alexander Curve northbound.



Small Peter Witt car 2766, shown standing on Wychwood Avenue near St. Clair Carhouse on a UCRS inspection trip in September 1971, is one of the two cars to be restored and used in the new tourist tram sightseeing service during the coming summer months. (Robert McMann)

* For the first time in ten years, Torontonians will see the sight of a Peter Witt car rumbling through the downtown canyons of the city this summer. On February 6, the Toronto Transit Commission approved the expenditure of \$33,000 for the renovation and operation of two small Witt cars in sightseeing service on a large loop routing through the downtown. The service will start on June 24 and run to September 1. Service will be offered from 10:00 a.m. to 3:00 p.m., 7:00 p.m. to 9:00 p.m. weekdays, and from 10:00 a.m. to 9:00 p.m. Saturdays, Sundays and holidays, on a large loop bounded by Church, King, Spadina, Queen. Part of the money will be used for the installation of an NA switch at the corner of King and Spadina.

The two cars to be used in the service are 2766 and 2894. Both cars will be extensively renovated by the commission, with possible restoration to the old hair-stripe paint livery of the 1930s. 2766 is owned by the TTC and currently in storage at St. Clair Division. The 2894 is coming back to the TTC after ten years of preservation outside of Toronto. The car is currently owned by Ontario Rail Association, having been acquired from the Ontario Science Centre as part of a collection of railway locomotives and other rolling stock not needed by the OSC. The car was preserved initially by Charles Matthews of Langstaff, Ontario in March 1963, and acquired by the Ontario Science Centre along with other components of the Matthews Collection in 1965. The TTC will have the car on long term lease from ORA. Another Witt car in the same OSC collection now acquired by ORA (2786) will find a new home on the Halton County Radial Railway.

2894 will be well-remembered by trolley fans as being the last car to operate on the DUPONT route on the opening of the University Subway on February 28, 1963.

The new tourist tram sightseeing service with the two Witt cars "could have the same appeal to Toronto as the cable cars have to San Francisco," according to TTC commissioner Gordon Hurlburt.

* On January 18, 1973, the Ontario Government approved the alignment of the Spadina Subway Line through the ravines and down Spadina Road, and offered to pay 75% of the total cost. However, ten Metro Council members put up opposition to this alignment and decided to fight for a Bathurst Street alignment which would be more expensive and take longer to build and keep the subway out of the ravine lands. On February 7, 1973, after a marathon five-hour evening session, Metro Council voted 15-14 (a tie 14-14, the tie-breaking vote cast by Metro Chairman Albert Campbell) to build the Spadina Subway Line through the Cedarvale and Nordheimer Ravines and down Spadina Road to St. George Station. This vote reaffirmed the decision made last September.

The TTC commissioners met in a special meeting on February 9 to discuss the Spadina Subway Line. Money was approved to begin engineering studies to begin on the ravine alignment. Assurances were also made that the TTC would restore the ravine lands to their original appearance and would employ professional landscape architects to aid in the restoration once the subway line was completed.

* The TTC has approved a Sunday and holiday fare plan that would allow individual adults, couples and families consisting of at least one adult and not more than three persons to buy a pass for \$1.00 good for unlimited public transit on the day of purchase. Approval for the family pass was given on January 23, for the individual adult and couple pass February 13. The passes will be introduced on February 18 and will be tested until December 2. For TTC purposes a child usually is considered a person under 58" in height but for pass purposes, a child will be a person under 12 years of age.

* On January 23 the TTC voted to extend the KINGSTON streetcar line west and north of its present western terminal at McCaul Loop, along Queen and up Bathurst to Bathurst Station to provide a new direct service to the downtown area which has not existed since the Bloor-Danforth Subway opened in 1966. A new name has been created for this service--"DOWNTOWNER"--and it will start on April 1. Base service will be every 7', the BATHURST service also reduced to 7' as well. There will be a car every 3-1/2' in base periods. One additional car will be added to the extended KINGSTON ROAD/DOWNTOWNER service, at a cost of \$20,000 a year. Service will operate 12 hours weekdays only.

* Power on the North Yonge Subway Extension to York Mills Station was turned on for the first time on February 12. Subsequently rail-grinding train RT14/15 was employed grinding the rails to profile on the main line tracks north of Eglinton. The southbound main was done first and the northbound main completed on February 12. The evening of the 12th, the first passenger-carrying subway cars ventured north on the North Yonge Extension. A six-car train (5377-76/5417-16/5438-39) left Eglinton Station at 1900 northbound on the southbound mainline. Trackage for the purpose of tests on braking and stopping distances and signal crashing testing.

When the line opens on March 31, trains will use only the northbound platform at York Mills Station.

* How do you install and splice nearly five miles of special cables along a four-inch overhead in a new subway tunnel? Bell Canada had to come up with the answer for the installation of emergency alarm communications and phone cables on the TTC's North Yonge Subway Extension to York Mills Station. The solution was found in the conversion of a Ford pickup truck to operate on the tracks within the confines of the tunnels.

By using the truck, the cost of the cable installation was far less than if the cable was installed in the conventional manner.

The truck was converted to operate on propane fuel within the confines of the subway tunnel, as using gasoline fuel would produce poisonous carbon monoxide gas. For Fairmont Railway Motors steel flanged wheels were applied to the truck--the two front wheels being modified to account the wide track of the front suspension. The truck's suspension was dampened to give stability to the special work platform that allowed linemen to fasten stainless steel clamps every four feet as the truck moved through the tunnel. The platform was adjustable for left or right hand operation and moveable in height. It was fitted with a roller-equipped fairlead to guide the cable into position.

The friction was improved between wheel and rail by coating the wheel rims and flanges with urethane. Test runs with the truck at Davisville Yard showed the tendency of the truck to climb the rail occasionally. This was corrected by shimming some of the urethane from the wheels and lining out the steering.

Two-ton reels of cable were mounted on a small flat car that was pushed by the truck.

Cable clamping began on the subway extension on November 13 and was completed on November 25. The truck was used for another three weeks by two cable splicers. The work platform above the truck had a special safety bar to which linemen could fasten their safety harnesses. Bell made certain that its men had adequate lights and mirrors to assure complete safety as the driver inched his way through the tunnel with the cable unreeling slowly before him.

The TTC will move the truck later this year over live trackage to the section of the subway between York Mills and Finch to complete the cable installation. After the subway opens to Finch and all tracks become live, the truck will probably face the cutter's torch and be carried to the surface in pieces.

* The TTC has updated its conceptual transit plan of 1969 and made some comment on the provincial policy statement on public transit of last November (see article on cushion train plans in this issue).

Under the new plan as outlined by the commission, the first priority should be the construction of a basic subway system--including a line along Queen Street. The elevated guide-rail system should be built later as part of a network integrating subway and commuter rail lines. The TTC admits there is a major philosophical difference between the urban transit policy of the province and the concept offered by the commission. The hope is expressed that further investigation and discussion will resolve any conflict. The TTC is of the opinion that the 56.1-mile network of guided trains would be best used in areas not densely populated. The TTC argues for 40,000 passengers-an-hour subway lines in the central.

The Queen Street subway line has received increased priority, placing it second in importance after the Spadina Subway line. Metro Council intends to give the priority to the completion of the Spadina line by 1976 or 1977.

The TTC says that high density development in the Thorncliffe, Flemington Park and Don Mills-Eglinton area of Metro Toronto indicates that the plans for the Queen line should be changed. In the plan the route extends south from Donlands station on the Bloor-Danforth line to Queen, west on Queen past Roncesvalles to the Humber. The revised plan would extend the Queen line north of the Donlands station to above Eglinton where it would connect with a future commuter rail line.

The new TTC plan anticipates an extension of the Spadina line, even before the decision on the final routing of the line as now proposed has been completely finalized. The extensions proposed include one to the north to above Finch Avenue to connect with the proposed east-west guided train line, and to the south below Bloor Street to serve the Exhibition and the Toronto Islands.

Other changes have been made in the new conceptual plan. The Eglinton subway line is withdrawn and replaced with the proposed Eglinton guided train line. An extension of the Bloor-Danforth Subway is recommended--to Kipling Avenue in the west and Eglinton to the east. The TTC proposed that a guided train line be built from the proposed Eglinton terminal northeasterly to the proposed Pickering airport. The route for another guided train line would run westerly from the Malvern housing development along a power line right-of-way and then south to connect with the proposed Kipling Avenue terminal. The TTC says that a logical expansion of the guided train east loop at the Exhibition would be into Metro Centre.

The TTC is satisfied that the Yonge, Queen, Spadina and University lines plus the commuter rail system will be able to handle the increased volume of transit riders anticipated from large commercial redevelopment projects in the downtown area.

BOOK REVIEW

Light Rapid Transit: the Immediate Answer for Edmonton.

University Practicum in Rapid Transit, Department of Extension, University of Alberta, 1972. \$5.00 from the Department of Extension of the U of A, Edmonton.) 53 pp., about 8-1/2" x 14", maps, photos, diagrams, bibliography.

This large, handsome booklet is both sophisticated propaganda for urban rail transit in Canada and a good survey of the development and present-day variations on the "limited tramline" concept in Europe since World War II. The phrase "light rapid transit" is apparently considered more suitable for North American public opinion, since it avoids conjuring up images of the traditional streetcar frustrating the voting motorist. But whatever name is preferred, a varied mass of data on super-streetcars is presented here, on the whole attractively despite uneven reproduction of a few of the technical diagrams of LRT designs. There is a list of existing and planned LRT operations, technical data on recent cars designed for subway-surface operation, and a photographic cross-section of the ways in which LRT can be fitted into existing urban environments. About half the space is devoted specifically to the design of an LRT system for Edmonton, with maps, topographic diagrams and cost estimates, showing how the network could be superimposed on its existing street and transit pattern with relatively little disruption or loss of amenity. A bibliography of 81 items, probably unfamiliar to the railfan, completes the presentation.

* The TTC has proposed almost \$2-million worth of alterations to the Dundas and Queen stations on the Yonge Subway line on account of the Eaton Centre development. This would include an underground passageway connecting the two platforms at Dundas Station and the removal of the sidewalk entrance at the southwest corner of Dundas and Yonge. A new entrance would then be built as part of the Eaton Centre project at this corner. The north end of the Queen Station will also be enlarged and a new Albert Street entrance built.

The TTC has also approved the construction of a pedestrian tunnel linking Union Station with the proposed Royal Bank tower on Front Street. It has been forecast that the Union Station subway station will become the hub of public transit services including rail, subway, and possibly air cushion systems.

* Trolley coach notes: The first of 40 new rebuilt trolley coaches ordered by the Hamilton Street Railway made its debut on November 29, 1972. The first order of 16 coaches has been completed and they are all in service on the HSR's three routes.

\$65,000 damage was done to three TTC trolley coaches in a fire at the Wade storage yard on the morning of January 10. 9283 was gutted in the fire and adjacent coaches to the 9283 received damage--9270 rear-end damage, 9297 left side damage. Arson was suspected as the cause, as a plastic milk bottle containing gasoline was found at the scene. Subsequently, a person was caught and arraigned for the arson attempt. Other TTC coaches out of service include 9214 (fire damage) and 9200 (being modified to conform with the rest of the fleet).

SHORT TURN:...A rapid transit system using electric trains has been proposed for Edmonton by a University of Alberta group. This plan provides for six lines and 37 enclosed stations....In a few years Montrealers might be using a special credit card instead of tickets to pay for their subway fares. There are no definite plans as yet, but it is something that the MUCTC is considering....A proposal to exclude automobiles from streetcar rights-of-way met quite a chilly response from Metro Toronto Roads Commissioner Sam Cass. Left turns would then either have to be abolished or motorists would have to take the risk of cutting across in front of oncoming cars....The TTC has turned down a request to allow militia soldiers in uniform to ride free on the system after 7:00 p.m....The TTC may manufacture its own streetcars if no suitable proposals are received from builders. \$15,000 has been authorized to prepare specifications for new cars....The following A8 PCC cars have been rebuilt to complete the rebuilding program for 1972: 4502/4520/4526/4528/4530/4536/4538/4539/4540/4549....250 passengers were evacuated from the Boston subway on January 4 after a fire broke out in a train at the Broadway Station....On February 12 the TTC commissioners turned down the proposed sale of 10 Kansas City cars to the San Francisco Municipal Railway.

While there is only one reference to Toronto in the text, the applicability of LRT to Metro Toronto, and therefore the value of this booklet as a guide to action, should be obvious, since the function of the limited tramline is similar to that of the province's planned air-cushion trains, but it does not run the risks of unproved technology. This booklet thus serves as a detailed technical and historical supplement to the proposals made by the TTC planning staff some years ago for suburban extensions using improved tramway technology. Photos and text also illustrate the German methods of upgrading existing surface routes through segregation of traffic, which might be applied to some existing Toronto lines.

Finally, the booklet's source is an interesting example of present trends in the planning field. The University Practicum was "a class study group of the Extension Department of the University of Alberta," which included both professional planners and interested adult citizens working for degrees in related fields. Thus, it represents a fruitful example of the "citizen activism" of the 1970s, and welcome evidence that at least some professionals are able to overcome their suspicion of the public, and become aware that there are more alternatives than the traditional mix of expressways, buses, and rigidly grade-segregated heavy rapid transit. Practical progress, the work suggests and goes far toward proving, does not depend only upon futuristic technology.

-- F. H. Matthews.

CN REAL ESTATE DEVELOPMENTS

* In a special ceremony held in downtown Toronto on February 5, Canadian National announced that it will build a 1805-foot television, radio, communications and observation tower--the world's tallest--as the first project in the Metro Centre Development. The tower is scheduled for completion in late 1974, and will be 57 feet higher than the Ostankino Tower in Moscow--the world's tallest man-made structure at present. The tower will be constructed of steel-reinforced concrete at a cost of \$21-million. It will occupy a quarter-acre at its base and sit in a reflecting pool surrounded by a park. An observation deck and revolving restaurant at the 1100-foot level will afford views of up to 75 miles. The restaurant will be accessible by elevators suspended in a glass shaft. The 305-foot antenna that will sit on top of the tower will beam television signals from CBC, CTV, and UHF stations, FM radio stations, and CN's telecommunications microwave.

* CN has called for redevelopment proposals for 65 acres of land it owns in Niagara Falls, Ontario. The property is in three parcels in the area bounded by Bridge Street, River Road, Victoria Avenue and Buttrey Street and includes the Niagara Falls railway station and express office.

If redevelopment takes place, the railways would be relocated to the north of the existing right-of-way and a new passenger station would be built as part of the project. Express offices would be moved to some other part of the city. The site overlooks the Whirlpool Rapids or Lower Bridge, about three miles downstream from the falls.

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With the completion of work on this issue your Editor is bringing to a close three and one-half years of association with this publication. 41 issues is the tally of NEWSLETTERS produced, representing many hours of writing, typing, layout and pasteup work done by yours truly and others. There are numerous people (too many to mention in this short space) who have provided information, photographs, and other assistance, who helped to make the publication the success that it was.

In those three and one-half years there were moments of frustration and sadness, moments of elation, particularly when an issue came off well all the way down to press.

What of the future??? Your new editor will be Steve Munro and he will take over production with the March issue. A new, larger editorial staff will be created to handle the myriad tasks associated with the creation and production of a publication of the size of the NEWSLETTER.

I will be taking time off to move back into the world of HO gauge model railroading, with the construction of a new layout. I will also "freelance", producing articles and contributing news and pictures to the NEWSLETTER from time to time. My name will not entirely disappear from these pages.

The NEWSLETTER has come a long way in its 32 years of existence. I am confident that the new editor and his staff will continue the tradition of the magazine and make the publication an even better one.

Bob W. Mann

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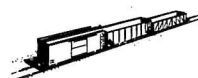
* CN plans a \$2-million renovation program in Kingston, Ontario that will include construction of a new, relocated station for the city. Work on the new station, to be built at a cost of \$700,000, is to begin in April and is expected to take about a year to complete. The new station is designed to provide 3000 square feet of waiting room space, with seating capacity of 108. It will be located at Counter and Princess streets, four miles west of the existing facility. Included in the station project is a pedestrian tunnel to permit two trains to load and discharge passengers at the same, and eliminating passengers having to cross the tracks.

The old 1895-built (by Grand Trunk) station will be demolished to enable building of a one-mile diversion of CN's main line through Kingston. This will eliminate a severe curve that all trains must now negotiate at a restricted speed of 30 miles an hour. In addition 15 acres of land will be opened up for redevelopment.

* CN and the newly organized St. John's Development Corp. have concluded a complicated land swap deal that will clear the way for a major hotel-office-convention project in downtown St. John's, Newfoundland. As part of the transaction, the developer will receive the old Hotel Newfoundland in the city's east end from CN and will build a \$20-million structure on 48,500 square feet of land between Water Street and Broad Drive on the north side of the harbour. The new 20-storey building will include 300 hotel rooms, convention facilities for 1000 people, indoor parking and office space for CN's Newfoundland area staff, plus space for office and commercial lease. Completion is set for 1975, with work to start on demolition of existing structures this spring.

The developer has received various concessions from the city for the project, including a 10-year suspension of property taxes on the site. As part of the agreement, CN has turned over to the developer the existing inbound and outbound express terminals near the old railway station in the west end of the downtown area. CN is building modern express terminals and related structures at St. Anne's on the city's fringe. The transfer does not include the existing station building. It will be continued as the rail terminal and used for other public offices.

The Newfoundland project is part of a program by CN to expand across Canada, in joint ventures with private enterprise, into areas where convention facilities are limited or non-existent.



Coming Events



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

March 30: Night streetcar excursion to mark the opening of the North Yonge Subway Extension to York Mills. Trip leaves St. Clair Carhouse 8:30 p.m. and will run until 1:00 a.m., covering both ST. CLAIR and ROGERS routes, and other points of interest. Photostops included. Fare \$4.00, 2/\$7, from the Trip Committee, c/o Box 122.

April 20: Regular Meeting. To be announced. (Fri.)

April 27: Hamilton Chapter meeting, 8:00 p.m. in the (Fri.) James Street Station, James Street North.

Readers' Exchange

WANTED: Photographs of Canadian National 2-6-0s 87, 88, 89, 90 which operated on the Meaford and Beeton Subdivisions, also CPR 4-6-0s 459, 488 which operated on the Teeswater and Walkerton Subdivisions. Peter F. Oehm, 358 Glenlake Avenue, Toronto, Ontario, M6P 1G4.