

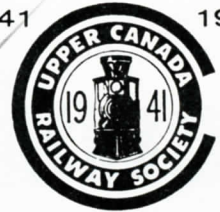
WHITBY + PORT PERRY RLY.

newsletter

Upper Canada Railway Society

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Four SW1200 road switchers of Canadian National hurry a freight train along on the York Subdivision near Bathurst Street, July 1, 1971.
(John Thompson)



A NEW TWIST IN CONTAINERIZATION

For years it was said that containerization would kill the St. Lawrence Seaway, and that such ports as Toronto would be relegated to handling bulk materials only.

Ignoring the pessimists, officials at the Port of Toronto have in the last few years been pushing ahead with plans to combine the benefits of containers with those of Great Lakes' shipping. In the last two years they have been meeting with small but encouraging successes. Now, they say, a turning point has been reached, and Toronto has become a major container port. The event was marked in September by the arrival of the port's first pure containership, the Europe Canada Line's Rando, a 150-container vessel formerly in service with CP Ships as the Beaverando. Containers destined for other Great Lakes' ports are off-loaded in Toronto and put on ECL Line ships going further up the Seaway. In addition to the ECL Line service, containers arrive at Toronto regularly on board semi-containerships belonging to 19 of the more than 40 lines serving the port.

The key to the port's success with containers, Captain Walter Culbertson, the Port of Toronto's director of terminal operations says, is that it is at the heart of a great market area. "You see, there are two basic philosophies at work," he says. "One is to move containers across the Atlantic as quickly as possible, using rail and truck transportation as the fastest means of transport. The other, the one held by the Germans, the Russians, is to come directly into the heart of the market, to do as much of the job as is possible."

The Port of Toronto's newest piece of equipment--a \$600,000 mobile container crane--recently arrived at Marine Terminal 35. At a maximum radius of 82 ft., the crane's capacity will be 26.4-short tons which will allow for the handling of all sizes of containers from the far side of the vessel. The crane is mounted on a mobile truck carrier and includes a unique tower and boom combination which will allow for maximum flexibility in crowded working areas. This is the first container crane of its kind in the world and was developed to meet the port's design criteria. As a result, the increased speed and efficiency in handling loaded containers will further minimize turn-around times of vessels calling at Toronto.

Container traffic being handled at Windsor, Ontario, can only be described as phenomenal, and there is no sign of a slackening in the pace at which it has developed over the last three years, say Canadian National officials. In fact, the city is well on the way to becoming one of the most important centres in Ontario for the handling of world-wide containers. Richard Veemis, manager of CN's Southwestern Ontario area, says the first import-export containers arrived in Windsor from Halifax in 1969. "That year we handled 136," he says. "The following year the number exceeded 2000. In 1971 we expect the volume will be 100% greater than last year."

Mr. Veemis attributes Windsor's emergence to a number of factors, chief among them being its proximity to Detroit and the U.S. Midwest at the end of rail lines connecting it with Canada's ocean ports. Most of the import-export containers arriving at Windsor are going to or from the United States.

Among other factors contributing to the growth of the import-export trade at Windsor, Mr. Veemis lists the city's accessibility to the U.S. highway system, to international barge shipments on the Detroit River, and the fact that bonded container shipments can move directly from ocean ports and undergo customs clearance at or near the end of their journey, rather than wait for clearance at the ports. "Also," he adds, "there is the fact the rail connections to Windsor ensure containers can be moved quickly to and from ocean ports all year round." CN in March opened a container handling yard near its express shed and equipped it with a mobile crane to lift containers to and from rail cars and trucks. It was designed to handle as many as 50 containers a day.

Although containerization has progressed a great deal in the last few years, it's still at the beginning, says Peter Hunter, container projects consultant at Interpool International Ltd., container manufacturers and lease operators, in Toronto. "A great deal has happened," he says, "but we're really just starting, particularly in the domestic uses of containers. You would be amazed at the uses being found within Europe for containers, which is really domestic usage."

Canadaian National is expected to move times as much container traffic this year as in 1969, the first full year of involvement with container systems.

Approximately 40% of the import containers being handled by Canadian Pacific on their Canada-UK/-Europe service are delivered to Ontario--chiefly Toronto, Ottawa, Hamilton and Windsor, with about an equal amount of export container traffic originating in the same areas, says CP Ships.

Containers from the UK can be shipped to British Columbia faster and cheaper via the Canadian "land bridge" than by the more usual sea route through Panama, say a UK firm of freight forwarders. The firm, W. Wingate & Johnston of London, recently shipped to 20-ft. containers to Vancouver by way of CP Ships' containerships service into Quebec City, and CP Rail's transcontinental service. Containers are now being shipped to the west coast by the UK firm on a regular basis with each sailing of CP Ships' four containerships.

-- CANADIAN TRANSPORTATION & DISTRIBUTION MANAGEMENT.

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Upper Canada Railway Society



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RAILWAY NEWS AND COMMENT

THE GREAT METRO CENTRE DEBATE

The closing weeks of November and the first few days of December were witness to one of the demonstrations of "people power" in Metropolitan Toronto, as many views, pro and con, about the massive \$1-billion Metro Centre project for the city's downtown were aired.

The occasion was passage of Metro Centre planning documents through another stage of approval by the City Fathers. A planning document was approved by the Toronto Planning Board November 23rd, and the document sent along to the Building and Executive Committee of the City Council for consideration. And consideration it did receive.

A two-part hearing was scheduled by the Buildings and Executive Committee on the Metro Centre Project for November 29th and 30th. Briefs were aired by various groups on the subject of Metro Centre.

A brief was presented by Anthony Adamson, retired professor of town planning at the University of Toronto, architect, and former councillor and reeve of Toronto Township, on behalf of the Union Station Committee, a group 500-strong formed to save the station building from demolition. Mr. Adamson urged that the Great Hall of Union Station be saved and incorporated into the Metro Centre project. He described the Great Hall as "a magnificent piece of interior architecture" and that its demolition would be an artistic, architectural, and spiritual loss to the city. It was suggested that the Great Hall could be used as a foyer for the office towers planned for the site, or serve as an indoor civic centre in winter or bad weather. Adamson's proposal was backed by P. G. Gilbert, an interior design instructor at Ryerson Polytechnical Institute, who showed sketches of a remodelled Great Hall prepared by his students. The sketches depicted cafes, shrubbery, galleries and a monorail passing through the hall. Adamson charged that the city was being "railroaded by the railways" on the project. "There is widespread public opinion, rightly or wrongly held, that the railways will go ahead unscrutinized and unsupervised except by council and the planning board."

Other speakers appearing before the committee shared the belief that there had been five months of silence on the part of the elected and appointed officials about the plan "which is so complex that the average citizen has trouble evaluating its benefits." Committee members were urged to allow a few weeks more discussion on Metro Centre that might prevent lengthy and bitter disagreement before the Ontario Municipal Board.

Representatives of the Confederation of Resident and Ratepayer Associations were dismayed that none of their suggestions regarding Metro Centre had been considered. Their concern was that Metro Centre planning was not based on the needs of the people--especially for low-rental housing, for which no provision had been made.

Nineteen more public representations were heard at the second meeting held by the Buildings and Executive Committee December 1st. The meeting finished up at 4:15 a.m. on the morning of the 2nd, after more than three hours of filibuster by Alderman John Sewell. The plans for the Metro Centre project cleared the committee by a 6-3 vote shortly before the end of the

meeting.

Metro Centre Developments Ltd. requested easing of the planners' recommendations to ensure "flexibility" in the project. The committee complied over the opposition of Alderman Sewell, who spoke for nearly three hours in an attempt to delay a final vote on a decision on the development. Sewell questioned Metro Centre president Stewart Andrews for 90 minutes on detailed aspects of the project, then spoke for another 90 minutes himself. He charged that Metro Centre is "the biggest swindle ever" in Toronto's history. He proposed 23 amendments to the document and spoke in favour of each one. All of the amendments were defeated by the committee.

The other committee members refused to adjourn the discussion and waited until past 4:00 a.m. for Sewell to stop talking and then took the vote. Because of the length of the debate, an audience estimated at almost 400 people at the start of the meeting dwindled to less than 50 by the end of the meeting.

The committee also heard sharp criticism of the development plans from residents attending the meeting. Six architects condemned the proposed demolition of the Great Hall of Union Station. Metro Centre president Andrews agreed to meet with Graham Emslie, Toronto Development Commissioner, and architect Anthony Adamson to discuss the preservation of the 83-foot high Great Hall of the Union Station.

Next stage of the road for the Metro Centre project is approval by Toronto City Council, and then onto the Ontario Municipal Board. The January 1972 NEWSLETTER will continue the story of the Great Metro Centre Debate.

As an indication of how acrimonious the debate on the project may become in the New Year, several ratepayer groups have indicated that they will press for an Ontario Municipal Board hearing to press for changes in the planning for the project. It may be well into the spring of 1972 before work can begin on the project. Approval must be gained from the Canadian Transport Commission for the relocation of railway tracks by CN and CP Rail before major construction work can begin.

TUNNEL AT SARNIA BLOCKED

Trains were backed up on both sides of the St. Clair River on November 21st after six carloads of auto frames became jammed in the railway tunnel connecting Sarnia and Port Huron. CN officials said the cars, which carried loads too big for the tunnel, had been in the yards on the Port Huron side awaiting ferry transportation to Sarnia. High winds on the Saturday evening apparently started the cars rolling down an incline toward the tunnel mouth. A derailling device normally would have halted them, but had been removed for a train due in. The ferries which operate across the river as well, were carrying as many cars as possible across the river until the tunnel was cleared.

RAILWAY FACILITIES AT WINNIPEG BEING UPGRADED BY BOTH CN AND CP RAIL

Canadian National and CP Rail are both carrying out extensive shop expansions in Winnipeg, totalling some \$10-million.

CP Rail is spending \$5.6-million over two years on expansion and renovation at the Weston Shops. A new \$688,000 paint shop will convert most of CP Rail's rolling stock to the new colours. Colour-coded panels will permit computerized car identification. A semi-automated wheel and axle shop, costing \$2.7-million, will be built on the site of the present paint shop. An existing shop making points and crossover sections for railway track switches will be renovated and expanded to build switch components at a cost of \$2.2-million. The expanded plant will service cars from across Canada.

Canadian National's \$4-million expansion at Transcona involves motive power and freight car repair operations, as well as on-site improvements. The three-year program --additional to the \$1-million wheel shop project already underway--provides for a 304 by 144-foot addition to the existing Transcona heavy repair diesel shop, freight car production line improvements, a new main access road and parking facility, plus modernization throughout the complex. Expansion of the diesel shop is required to handle the 70-foot long 3000 horsepower diesel units now in use.

A stepped-up program of passenger car cleaning and equipment maintenance will be introduced at terminal points, as well as expanded training programs for sales forces, station staff and on-train personnel. In an effort to ensure the on-time operation of all trains, CN has launched studies dealing with equipment, motive power requirements and scheduling.

CP RAIL ASKED TO INDICATE PLANS FOR NEW WINNIPEG YARD

CP Rail should be asked to declare whether it intended to remove its freight yard from Winnipeg's central area or reduce trackage, according to a decision of the Winnipeg City Council Environment Committee November 1st. A reply was requested within 30 days, or a second meeting would be held. There was no decision on what would be done at the second meeting. One committee spokesman said that there were two courses of action open. The city could put pressure on the legislature to remove the tax exemptions now enjoyed by the railway. Alternatively, if the city goes ahead with the overpass project and CP Rail later finds it feasible to move, the railway might have difficulty in getting cooperation and assistance from the city to relocate to another site.

A decision on CP Rail's marshalling yards in Winnipeg until the opinion of the Metro Winnipeg-Federal-Provincial Urban Rail Study is known, sometime in the spring of 1972. At issue is the proposed Sherbrook-McGregor overpass which has been held up pending some indication from CP Rail about whether it plans to reduce the track-age or remove the yards.



YARDMEN WALKOUT HITS CN IN BRITISH COLUMBIA

Freight service on Canadian National lines in British Columbia was disrupted November 25th by a walkout of 240 yardmen in Vancouver and 40 men in Prince George. The walkout was staged over a dispute in the interpretation of a new contract for the United Transportation Union that went into force October 31st.

Canadian National sought a court order from the British Columbia Supreme Court, to restrain the men from participating in the slowdown, contending that the walkout was illegal.

The yardmen returned to work December 2nd, after receiving legal advice to stop their protest against new provisions in their contract.

ONTARIO NORTHLAND PENSION SETTLEMENT

An Ontario Government study group set up in October to resolve a dispute that disrupted transportation and communications on the Ontario Northland Transportation Commission system, has recommended an increase in the ceiling on pensions payable to employees of the ONTC. Transportation and Communications Minister Charles MacNaughton said the Government has accepted the study group's proposals and has asked the ONTC to implement them immediately. He also asked government pension officials to meet employee representatives to work out a starting date for the new pension proposals.

Under the present ONTC pension plan, employees receive a pension based on 1.66% of the average of their best five years' salary for each year of service up to a maximum of 50% of the five year average. The study group has proposed that this 50% maximum be raised to 70% but that the rate of 1.66% a year remain in effect.

RAIL UNION DEMANDS

The basis for a nation-wide push for five basic railway pension demands has been formed by members of the Edmonton Central Council of Railway Unions. The council, including 3000 railway workers and six unions, held a mass meeting attended by about 300 members who formed a seven-member committee to apply pressure for a core of minimum pension demands. The five demands are: adequate increases for all present pensioners on the low end of the pension scale; an increase from 1.5% to 2% per year of service in calculating pension benefits to a maximum of 70% at time of retirement, and achieving parity with Air Canada employee benefits; that CN maintain its share of pension responsibility by paying directly into the pension fund, rather than by a system of unfunded liabilities as at present; that the CN Pension Board consist of four representatives of employees and management and an impartial chairman, rather than four company and three union representatives at present; that pensions become negotiable and be negotiated by a body appointed by railway employees.

CIRCUS TRAIN VISITS CENTRAL CANADA

A real honest-to-goodness circus train belonging to the Ringling Brothers Barnum and Bailey Circus paid a visit to central Canada during November, travelling over CP Rail lines to Ottawa and Quebec City for shows in those cities. The train consisted of the following equipment: three tunnel cars, five piggyback flats, four stock cars, and eighteen coaches (occupied). CP Rail supplied power, crews, and brake vans to move the thirty-car show train between engagements.

The train was routed into Canada through Buffalo over Penn Central, and TH&B to Hamilton. The train was entrusted to CP Rail in the wee morning hours of November 9th, travelling through Toronto (Agincourt), Smith Falls, and arriving in Ottawa at 1240.

Upon arrival in Ottawa, the train was handled into Union Station. The eighteen coaches on the rear of the train were parked on track 6 in the station; the tunnel and piggyback cars being moved to CP Rail's piggyback facility for unloading and storage.

Upon completion of the engagement in Ottawa the show train left Ottawa at 0100 November 15th, moving via St. Martin Jct, Trois Rivieres, to Quebec City, arriving there at 1130. The train left Quebec City on November 22nd, returning via Trois Rivieres to St. Luc yard in Montreal, from whence the train was turned over to the Napierville Junction Railway and the D&H.

The Cover

Canadian National 6218 puts on a fine show of smoke and steam for the photographers at the site of the second runpast at mile 3.2 on CN's Fergus Subdivision on the Upper Canada Railway Society's winter excursion to Lynden Junction and Guelph on January 26, 1969.

(Tom Kelcec)

PASSENGER TRAIN NEWS

* Young travellers now have the choice of air and rail transportation at reduced rates through a single youth travel discount plan being introduced by Canadian National and Air Canada. Up to the present, each company has issued and honoured its own individual youth card which provides the holder with substantial savings on regular transportation rates. The new dual-purpose ID card, priced at \$3.00, is available to anyone between 12 and 21 years of age and will be honoured by both Air Canada and Canadian National. Card holders will be entitled to a 25% reduction on regular coach fares on any Red and White day under CN's Red, White and Blue fare plan, and a one-third reduction on standby economy travel via Air Canada anywhere in North America.

Persons already holding the existing CN youth ID cards issued by CN may obtain the new combined air-rail ID card for an additional \$1.00. The existing Air Canada Swing-Air Club ID card will continue to be valid and will not require reissuance. The new CN Youth Plan/Air Canada Swing-Air Club ID card will be honoured by most of the airlines for travel within North America and will also be good for discounts as high as 50% in CN Hotels and various other hotel chains in Canada and the U.S.A., discounts at major ski areas in North America, and also on the purchase of Thomas Cook and Son travellers' cheques.

* The future of railway passenger service between Sault Ste. Marie and Sudbury is to be the subject of a report being prepared for the Sault Ste. Marie City Council by City Administrator Don Evans and City Solicitor L. P. Staples. A resolution was passed by the council requesting the two officials to supply for the consideration of council a report on possible suggestions to be made to CP Rail on the service. CP Rail applied over two years ago to the Canadian Transport Commission for permission to discontinue the service.

* Metropolitan Toronto may soon have a new transportation agency that will plan a network of commuter rail lines fanning out from Metro. This was predicted by Metro Chairman Albert Campbell November 11th in a speech to the East-West Gateway Coordinating Council in St. Louis, Missouri.

Mr. Campbell said the new agency would make use of rail lines operated by Canadian National, CP Rail, and the Toronto Transit Commission. He said the hope is that, within twenty years, Metro Toronto may be criss-crossed by a network of high-speed transit lines, carrying space age vehicles in a "pollution-free environment". The new Metro transportation agency would be involved with policy and planning and would have decision-making powers.

* The Canadian Transport Commission has refused a request that it review a May 31 decision allowing the abandonment of Canadian National passenger service between Calgary and Camrose, Alberta. The application for the review, submitted by the province and the municipality of Kneehill, Alberta, contained no new evidence concerning the original ruling. Without the submission of new evidence, the CTC was satisfied its decision was correct.

* A sleek red and purple train arrived in Sanford, Florida, fifteen minutes early, on December 7th, pulling a load marking a new concept in American rail travel. The first Auto Train had completed its fifteen-hour, 900-mile maiden run from Lorton, Virginia (near Washington). Some 95 passengers from the frigid North piled out of the 15-car train into the warm sunshine. The train carried 28 automobiles. On normal runs it will carry 104 automobiles and as many as 400 passengers.

WORTH NOTING

- * The City of Windsor has been encouraged to undertake a complete study of the railway trackage situation on its downtown waterfront, following a recent meeting with the Railway Transport Committee of the Canadian Transport Commission. City manager John Steel said the first concern of the study would have to be the establishment of a "practical physical alternative" to the downtown marshalling yards and then cost factors would have to be determined.
- * Canadian traffic and distribution personnel now have an easier time locating information on CP Rail freight train movements thanks to a new type of "airline" schedule the railway is distributing to its customers across Canada. The schedule features a unique easier-to-read schematic diagram design which allows the customer to find in once glance a particular freight train's direction, frequency and arrival and departure time at over 35 major Canadian centres and eight U.S. gateway points. Among the other information on the new schedule is an easy reference chart of sample transit times and a listing of all CP Rail freight sales and transportation offices.
- * Canadian National has awarded a contract for more than \$1-million to ATCO Quebec Ltd. for 210 housing units for maintenance personnel.
- * CP Hotels and Halifax Developments Ltd. have announced plans for a \$7-million, 271-room luxury hotel in downtown Halifax. The hotel is to be completed in the spring of 1973 and will have facilities including an indoor-outdoor swimming pool and banquet room for more than 500 people.
- * CP Hotels has also announced a \$12-million renovation and refurbishing program for Toronto's Royal York Hotel. To be added to the hotel's facilities are five new dining rooms, four new bars, a penthouse show suite, shopping arcade and redesigned foyer and reception area. The new dining rooms will include an English pub, a French restaurant, a Japanese steak house, an Italian Trattoria and a new buffet. The new bars will include a small lounge adjacent to the Imperial Room, a lounge next to the Black Knight Room, a stand-up bar in the lobby, and another lounge to be called The Escalator Bar. All of the new bars and restaurants will be opened by the fall of next year. In addition all of the 1600 guest rooms will be redecorated and outfitted with colour cable television.
- * Service on the Ontario Northland was disrupted November 28th when 27 cars of a southbound freight jumped the tracks 55 miles north of North Bay.
- * Canadian National has incorporated its International Consulting Division as a separate subsidiary, CANAC Consultants Ltd. A recent agreement with Air Canada will enable the new company to offer consulting services with both air and rail transportation technology. The division has handled 35 foreign assignments. Air Canada has an assistance project in East Africa, and CN is providing management and training for the Zambian rail network.
- * Work on the first 313-mile link of the 1162-mile Tan-Zam Railway was completed November 10th, joining the countries of Tanzania and Zambia. The railway is being constructed with Chinese assistance, and was begun two years ago. Work on the railway is expected to be completed by 1974.



A NEW WAY TO MOVE GRAIN

Transporting grain from country elevators to terminal ports is an operation that must be kept efficient as it is an important link in the pipeline from the Prairie grain fields to markets around the world. Officials of Canadian National believe they have discovered the ideal way of moving grain quickly, economically and safely. Round, steel-constructed hopper cars, used primarily for transporting potash, have proved excellent, and in fact are superior substitutes for conventional boxcars. The heavy potash season is from January to April and when not in demand these cars are taken to Melville, Saskatchewan, where they are thoroughly cleaned (to prevent contamination) before being filled with grain.

They are loaded from the top by elevators whose grain spouts are situated high enough and unloaded at terminal elevators by removing a trap door on the bottom of the car. This eliminates the costly and cumbersome activity of breaking the six-foot grain doors on each side of the conventional boxcar to facilitate unloading and the subsequent reconstruction of new ones. The loading and unloading procedure is simplified and accelerated.

Hopper cars are also economically feasible because they can hold over 3000 bushels whereas conventional boxcars only have a capacity of approximately 200 bushels. F. A. Arnold, transportation assistant for CN in Saskatoon, said that a unit train of hopper cars on one occasion transported 17,500 tons; additional cars could have still been added. Since they are constructed of steel they are less likely to allow grain-spoiling leakage.

Hopper cars, however, can only be used under two conditions. Elevators must have grain spouts high enough to load the cars from the top and railway tracks must be able to support the combined car and grain weight--which in some cases can reach 220,000 pounds.

These conditions have eliminated the use of hopper cars in some areas since many elevators are only equipped with low spouts for loading boxcars from the side while not all tracks are capable of withstanding the heavy weight. Until newly-constructed elevators are provided with the necessary facilities, the present number of hopper cars is adequate.

Hopper cars have been used intermittently for some time but came into their own two years ago. It is almost impossible to estimate the number of cars utilized in transporting grain since the figure varies as the need for potash cars increases and decreases. About 150 cars are being presently used to transport alfalfa pellets from the Arborfield and Zenon Park, Saskatchewan, plants to Vancouver.

A special oil test train prepares to discharge heavy fuel oil directly through hatches between the tracks into a concrete underground storage tank at Douglas Point, Ontario. The 18-car test train was operated November 22nd by Canadian National to test rapid dump unloading facilities developed at Douglas Point for Canada's first unit oil train. Subsequently the first 42-car unit train made its maiden run from Imperial Oil's Montreal East refinery to Douglas Point on November 24th. (Canadian National)

FIRST UNIT OIL TRAIN MAKES MAIDEN TRIP

The first ever unit oil train to operate in Canada made its maiden trip from Montreal to Douglas Point, Ontario, on November 24th. The 42-car Canadian National train carried 635,000 gallons of heavy fuel oil from Imperial Oil's refinery at Montreal East to an auxiliary steam plant which is generating power for the Bruce Heavy Water Plant now nearing completion at Douglas Point, Ontario. The heavy water plant is being constructed for Atomic Energy of Canada and will be operated by Ontario Hydro as part of the Bruce Nuclear Power Development. Process steam is required in heavy water production.

Officials of Canadian National report the unit oil train and the 'rapid dump' unloading system developed for it have already drawn enquiries from other transportation planners in Canada and the United States who see a possibility of using similar techniques to meet other fuel shipping requirements.

Unit trains are designed to carry a single commodity and usually operate as a fixed unit in a fixed cycle. The first run of this unit train and all subsequent runs for the balance of 1971, consist of 42 cars. When the Bruce plants reach capacity, train size will increase to 63 cars. Current schedules call for the trains to operate on a continuous 72-hour cycle with delivery taking place at the steam plant every three days. Transit time will be 24 hours each way to cover the 510 miles between the Imperial refinery and Douglas Point, with 24 hours available in the cycle for loading and unloading.

Loading will be carried out on two tracks at the Imperial refinery in conventional fashion through hatches on top of the cars. The unloading operation, however, is unique. The cars will drain directly into an underground concrete tank. A trackmobile will position the cars six at a time on tracks over the underground tank. Once wrenches have opened valves in the bottom of the cars, the oil will drain through hatches into the tank, from which it will be pumped through a pipeline into a pair of 180,000 barrel conventional storage tanks.

The unloading time for a trainload of oil is less than eight hours. The train schedules, the insulated jumbo tank cars developed by Procor Ltd. for the service, and the unloading system are all specially designed to meet the problems of shipping large volumes of heavy fuel oil. In addition, a 12-mile spur line from CN's line at Port Elgin has been constructed to the site of the heavy water plant in order to accommodate the unit train.



R. G. Amm photographed this unusual vinegar car owned by Rinehart Vinegar Company (reporting marks RVLX 101) at Stayner, Ontario, in March of this year.

STATISTICS CANADA RAIL SURVEY

Recently released Statistics Canada figures on the two major railways state that employment on Canadian National dropped to 80,528 in 1970 from 107,007 in 1923. In the same period, the payroll rose to \$654.4-million from \$153.88-million. CP Rail employment declined to 54,159 in 1970 from 68,778 in 1923. The payroll climbed to \$348.14-million from \$102.33-million in that time.

Passenger train service underwent some ups and downs in the 48 years between 1923 and 1970. But comparing 1923 with 1970, the number of revenue passengers carried by CN plunged to 13,433,000 in 1970 from 23,684,000 in 1923. Proportionately, the change was even more dramatic in CP Rail with the passenger total dropping to 5,306,000 in 1970 from 16,224,000 in 1923.

CN recorded a slight increase in the number of revenue passenger miles while CP Rail reported a significant decline. CN revenue passenger miles rose to 1.738-billion from 1.447-billion while CP Rail totals decreased to 428-million from 1.401-billion. CP Rail passenger revenue has dropped to \$12.350-million in 1970 from \$38.05-million in 1923 while CN passenger revenue has increased by \$66.798-million from \$39.285-million.

The freight business has been the bright spot in the railway industry. CN revenue freight tonnage rose to 107,427,000 in 1970 from 57,248,000 in 1923. CP Rail reported an increase to 77,400,000 tons from 32,939,000 tons. CN freight revenue jumped to \$790,846,000 in 1970 from \$185,241,000 in 1923 while CP Rail freight revenue climbed to \$544,806,000 from \$139,979,000 in the same period. With all expenses and revenues counted in, net operating income was only slightly greater in 1970 than it was in 1923. CP Rail showed an increase to \$42,273,271 from \$40,315,814 while CN net operating income rose to \$29,543,838 from \$21,123,544.

READING FILES FOR REORGANIZATION

The Reading Railroad, claiming that it cannot pay approximately \$11-million in debts and taxes, has filed with the U.S. District Court in Philadelphia for reorganization under U.S. federal bankruptcy laws. The railway operates about 1200 miles of trackage in Pennsylvania, New Jersey and Delaware.

Reading becomes the second railway based in Philadelphia to take such action because of staggering financial problems, laid primarily to deficit operation of passenger and commuter trains.

In September, Reading said it would discontinue some of its commuter services in the Philadelphia area if it did not get larger subsidies from the Southeastern Pennsylvania Transportation Authority (SEPTA). Over 25,000 passengers are carried on Reading lines.

Reading received a 10% fare increase last February, but it said that rising costs for labour and equipment wiped it out. SEPTA paid Reading \$4.7-million in subsidies during the past fiscal year. Reading said it needed at least \$5-million to avert reduction of service.

Reading, like Penn Central, has long sought to have SEPTA take over its commuter facilities.

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RAILWAYS AND PROPANE PRODUCERS STUDY TANK DISASTER PLANNING

Canadian railways and propane producers are in the early discussion stages of an emergency assistance plan to cope with rail and highway transit tank car disasters. Spokesmen for both CP Rail and Canadian National say they would support plans to minimize personal, property and environmental damage caused by derailments or train wrecks. To support the planning stages of such a program, Major General (Ret.) Bruce V. MacDonald, president of the Canadian Chemical Producers Association, outlined his organization's emergency plan for the Propane Gas Association of Canada's fourth annual transportation symposium in Calgary. The plan has been put into operation as an emergency assistance plan for accidents involving chemicals in transit by highways, rail or water transport.

The plan, Gen. MacDonald said: "enlists the cooperation of its members and coordinates their effort to provide technical advice and assistance to fire, police and civil protection authorities in the event of highway, rail and marine accidents involving chemical products."

CP Rail spokesman Ed Shute said his company supported any plan to enhance transportation safety for propane or chemicals, and said his company had made extensive studies on major train wrecks involving tank cars. "Trains don't go off the tracks for the same reasons every time," he said. Mr. Shute said tank cars should have interlocking style couplers to prevent jack-knifing in an accident.

DOMTAR ASKS CTC FOR LOWER RAIL RATES FOR CHLORINE SHIPMENT

Domtar Ltd. has asked the Canadian Transport Commission for lower rail rates on shipment of liquid chlorine from Beauharnois, Quebec, to its plants at Windsor, Quebec, and Cornwall, Ontario, the first case under the "captive shipper" section of the Railway Act. CP Rail and Canadian National say Domtar is not a captive shipper but has an alternative means of transport. Domtar, which says road transport of liquid chlorine is too dangerous, currently pays 58¢ for transporting 100 pounds 112 miles from Beauharnois to Windsor and 46¢ for the 63 miles between Beauharnois and Cornwall. The CTC has ordered Domtar to say whether it intends to proceed with its application before continuing with the hearing.

MLW-WORTHINGTON PROFITS UP

MLW-Worthington Ltd. has reported a 51% increase in profit for the three months that ended September 30th, compared with a year earlier, but profit for the nine months ending September 30th remains lower than a year earlier. Profit was \$486,000 or 61¢ a common share for the nine months ended September 30th, compared with \$582,000 or 73¢ a share a year earlier. Net billings to customers declined to \$34,945,000 from \$35,045,000.

New order bookings rose to \$57,085,000 from \$41,839,000. The unfilled order backlog at September 30th was a record \$61,847,000, compared with \$46,916,000 a year earlier. For the three months ended September 30th, profit rose to \$195,000 or 25¢ a common share from \$129,000 or 16¢ a common share a year earlier. Net billings to customers rose to \$12,824,000 from \$11,117,000. New order bookings declined to \$16,600,000 from \$25,609,000. The company says its order backlog ensures a high level of production well into 1972.

Coming Events



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

1972.

- Jan. 21: Regular meeting. Steam in Southern Africa. (Fri.) Doug Sheldrick.
- Jan. 27: Hamilton Chapter meeting, 8:00 p.m. in the CN (Fri.) James Street Station, James Street North.
- Feb. 18: Annual Meeting of the Society. Reports of Officers and Committees for 1971. Election of new Board of Directors for 1972. (Fri.)
- Feb. 25: Hamilton Chapter meeting, 8:00 p.m. in the CN (Fri.) James Street Station, James Street North.

B.C. Hydro's New SD38

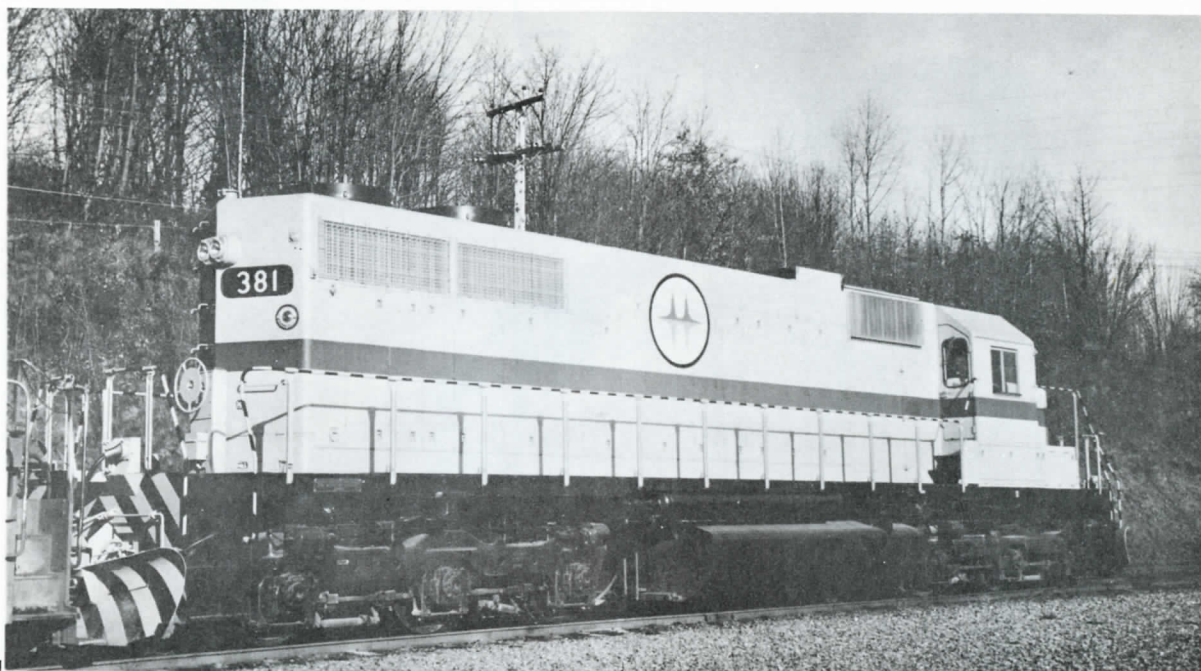
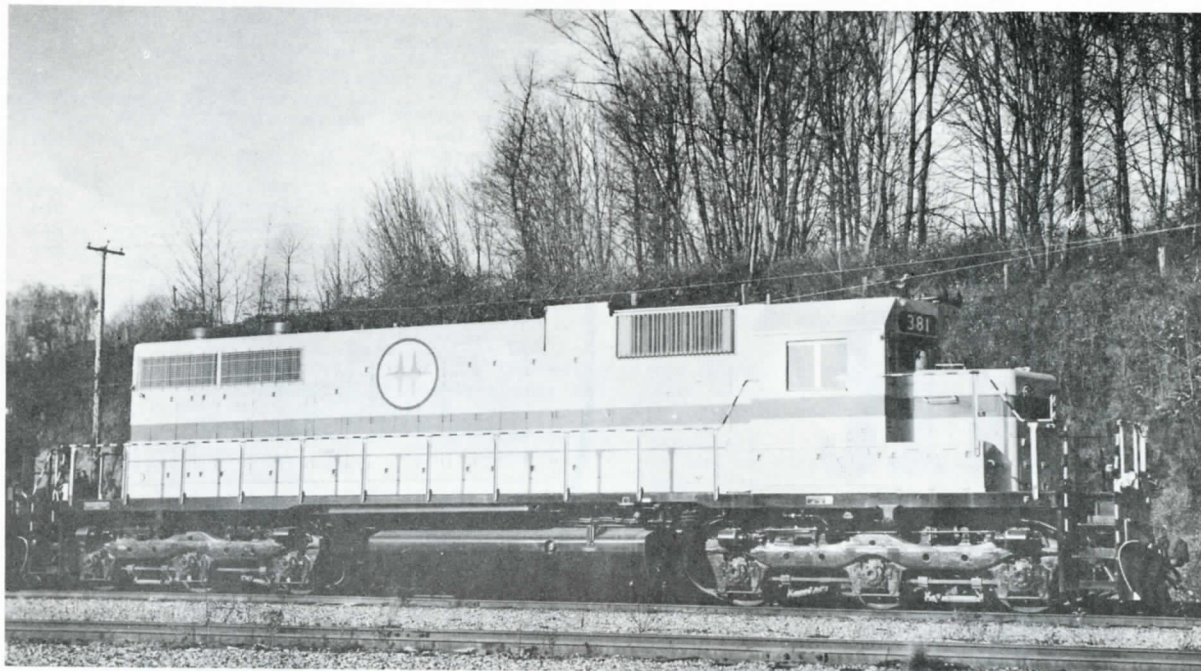
[Information and photographs -- Keith Anderson]

A motive power shortage on the British Columbia Hydro Railway was eased markedly, when on the 10th of November, B.C. Hydro took delivery of its brand-new SD38. This locomotive is unique, as it is the only representative of its type in Canada. The engine was imported from the United States, and was built by Electro-Motive Division of General Motors at La Grange, Illinois. The unit was not manufactured in Canada, as General Motors Diesel in London did not want to set up a production line for a single unit.

This unit packs a 2000 hp. V-16 645E engine as the prime mover. The builder's number is 37816. The new locomotive has displaced two SW900's (900-911) on the Fraser Valley freight run. B.C. Hydro is more than pleased with 381; two additional sisters (382, 383) will join 381 sometime in 1973. They will also be built by EMD.

B.C. Hydro had on lease two Canadian National GP9's--4402 and 4415--to ease the motive power situation. They were returned to CN in Vancouver on November 5th.

The photographs of 381 were taken at New Westminster on November 22nd.



The 64's of CNR

In charcoal black, and olive drab,
Her tender painted green,
The big eight-wheeler Northern
Was the epitome of man.

Her road was Canadian National
Sixty-four hundred was her class
Great six-foot, white, walled drivers,
And a number board of brass.

She was built for speed and beauty
Streamlined from head to toe.
Passenger service was her game,
And man! Could she make them go!

Coal of eighteen tons she carried,
Water, eleven thousand gallons.
Three hundred and fifty tons of steel,
Working pressure at two hundred and fifty pounds.

A living, breathing, monster of our time.
Steel and steam, a wedded team,
To do the work of man and nation,
This was her life, and her vocation.

Spadina roundhouse was her home,
The Lakeshore route her stamping ground.
From Montreal through to Toronto,
You could hear her haunting whistle sound.

Ninety miles an hour plus,
Sometimes a hundred, running late.
Flashing, rocking, rolling hard,
At a mile consuming gait.

Smoke a-rolling from the streamlined cowl,
Safties plumbing from their feather;
Air pumps throbbing at the trainline,
Through the wind, and rain, and sunny weather.

Side rods flashing faster still
Stroking drivers, pounding hard;
Running swift to make the hill
Each revolution making yards.

Then! Along came nineteen-sixty,
And the diesels came upon the scene
With their rumbling and stenchy smell
Displaced the CN "Queen of Steam".

Nostalgia must still, to have its place,
When "low", the haunting whistle in the night
Brings back a familiar streamlined face
And only "God" knows steam was right!

One hundred years, or more, upon the scene;
Can "any" diesel equal this??
Expensive toys for executive boys
Can never! never! equal this.

-- JIM SHETLER.



(Robert McMann
Collection)

THE PORT WHITBY AND PORT PERRY RAILWAY

By Brian Winter of the OSHAWA TIMES.

One hundred years ago this month, railway service between Whitby and Port Perry began on a 22-mile stretch of track called the Port Whitby and Port Perry Railway, popularly known as the "Nip and Tuck".

Although almost every trace of this important railway has now vanished, in its day it served to bring the grain and lumber trade of Ontario and Victoria Counties to Whitby and operated a regular passenger service at 60¢ for a one-way trip and \$1 for a return trip.

Although the first locomotive reached Port Perry from Whitby in November 1871, it was not until December of that year that regular service was inaugurated.

SERVICE

On December 2, 1871, a reporter from the Whitby Chronicle accompanied the first shipment of goods to Port Perry and gave the following description of the trip:

"The locomotive "Scugog" with one of the temporary constructed boxcars and some platform cars loaded with freight left the Whitby Station at 11:40.

"At the four mile post wood was taken in, occasioning a stoppage of four or five minutes. From this point the road to the harbour is as straight as an arrow and a most beautiful view of the lake and surrounding country is obtained.

"At 11:55 another start was made, and Brooklin, 3-1/2 miles further on, reached in eight minutes. A further delay and additions to the company on board.

"The eleven mile post near Myrtle reached at 12:23. A delay of 25 minutes in taking on water, etc., the pumping apparatus being as yet in an unfinished state, and new pumps in course of construction.

"From Brooklin to Myrtle there is a long and heavy grade reaching as high as 90 feet in the mile, and for the four or five miles from Myrtle to the summit at the ridges, the grade is also, as might be expected, long and steep.

"The cutting at the summit for about a quarter of a mile is made in some places to the depth of 50 feet, through clay and sand, which is inclined to slip and give way with every variation of the weather and though upwards of \$20,000 have already been expended upon it, a further larger outlay will be necessary to render the line at this point perfectly secure.

"Passing slowly by Manchester and Prince Albert stations, Port Perry is reached at eighteen minutes past one, and allowing for stoppages, the whole distance of 22 miles accomplished in one hour and four minutes.

"A number of deviations were pointed out to use from what appeared to be the direct line, the following of which would have shortened the distance by at least one mile but, we were told that the contractor had an object to accomplish in making the distance 22 miles, and that instead of cutting where he could have done so without much difficulty through, he ran the line around the base of the little hills and caused many unnecessary curves which might have been avoided.

"Badly constructed culverts and dangerous unfinished embankments were also pointed out and which form part of the subject matter of litigation now going on between the company and the contractor.

"With these drawbacks, which are only a matter of time to bet over and set all right, the road is a good one.

"The ties, principally of the best hemlock, are well laid and as close as from 18 to 27 inches from centre to centre and competent judges declare it--we use our own words--'the best tied road in Canada'.

"The run from Port Perry to Whitby is leisurely made in about an hour, not a stick of wood being required from the time of leaving the summit--a distance of 15 miles. In fact, for this latter distance, a load of any weight with sufficient locomotive capacity to hold it in check might be conveyed without any propelling power."

The Chronicle reporter described the Port Whitby and Port Whitby Railway as the shortest and cheapest of any running north from Lake Ontario.

ADVANTAGE

It had an advantage over the Midland Railway from Port Hope because it was 25 miles shorter and terminated at one of the best natural harbours on Lake Ontario, he said.

While the railway was still under construction, it was estimated that in one year it would ship 30-million feet of sawn lumber, 15,000 pieces of square timber, 5,000 cords of wood, 2,000 cords of tan bark, two-million flour barrel staves, three-million shingles, 300,000 bushels of grain, 10,000 barrels of flour and 12,000 passengers.

The rails were shipped from Wales in 1871 and 70 years later, when the line was closed, they were torn up and melted down for war materials to aid Britain in the Second World War.

The railway company built a grain elevator and wharves at Port Perry to handle the shipments and the tracks led into the grain elevator at Port Whitby. During the 1870s and 1880s, the entire eastern pier at Port Whitby was piled from end to end with lumber for shipment, which came in on the Nip and Tuck.

In 1871, the officers of the Port Whitby and Port Perry Railway were Chester Draper, owner of Whitby Harbour; James Dryden, a wealthy farmer from Brooklin; James Holden, one of the founders of the Dominion Bank; N. G. Reynolds, sheriff of Ontario County who built the Ontario Ladies' College as his private residence; Joseph Bigelow, and Aaron Ross, merchants in Port Perry; K. F. Lockhart, manager of the Ontario Bank in Whitby; Thomas Paxton, MPP and Edward Major.

Mr. Draper was president, Mr. Bigelow vice-president, and Ross Johnston, secretary.

EXTENDED

In 1877, the railway was extended to Lindsay to connect with the Victoria Railway and open the lumber trade at Fenlon Falls and Bobcaygeon to the Whitby market.

Mr. Holden, who managed the affairs of the railway in its early years, had dreams of building a transcontinental railway from Whitby to the Pacific Ocean, but his plan was never realized. He died in Winnipeg in 1881 of pneumonia, while attempting to obtain support for his scheme.

The Nip and Tuck had its share of misadventures. During its construction the contractor quit and a lawsuit developed between him and the company.

It took four years to raise enough capital to build the railway and even as the first train made its run to Port Perry, there was a desperate need for money.

Once when debts became too high, Sheriff Reynolds was ordered to seize one of the locomotives. He and his deputy erected a barricade of ties on the track, but when the engineer saw the blockade, he fired up the locomotive and plowed through the ties, sending the sheriff and deputy running for their lives.

Often the brakes on trains failed coming down the steep grade from Port Perry and on one occasion, a train of mast timbers ran the whole 22 miles out of control and nearly went off the end of the Port Whitby wharves into Lake Ontario.

SNOWDRIFTS

Trains bringing in high school students from the north to Whitby often became stuck in snowdrifts and once when there was no hope of getting out of a drift, the train crew and students spent the night feasting on eggs and sides of bacon.

James Holden purchased three locomotives for the railway from a firm in Portland, Maine, and they were named the James Dryden, James Austin and James Holden, after directors of the company.

The James Dryden was lost in a fire which burned the roundhouse on Mary Street in Whitby in 1875. A new roundhouse, built after the fire, is now used as an auto repair garage.

The original wood-burning locomotives were replaced in 1883 by coal-burning engines.

[For additional information on the Port Whitby and Port Perry Railway, see G. R. Stevens Canadian National Railways, Sixty Years of Trial and Error, Volume One.]



What's a Canadian National passenger train doing with two CP Rail SW1200RS diesel units as motive power on a piece of CP Rail track???

You may wonder, ah, they are being diverted because of a train wreck on a CN line. Wrong! Try again.

Another clue--the track is a former Canadian Pacific inter-urban line.

Give up?? The correct answer is that the train of CN passenger equipment being pulled by the CP Rail diesels is an excursion special, sponsored by the Kitchener-Waterloo Big Brother House, on October 16th. The trip was run in part over the former Lake Erie & Northern interurban line from Kitchener to Brantford and return. Hence the CP Rail diesels shown (top left) outside of Paris, and (right) in Galt, with the CN equipment. The trip was highly successful and well patronized.

[Two photographs--Charles O. Begg]



[illegible]

Canadians spend an estimated \$10,000-million a year on transportation. This is the price paid by the public, private and corporate sectors of the economy to move people and products from Point A to Point B. About \$5,000-million of this total comes from the private sector, nearly \$2,500-million from the public purse, and the rest from corporate treasuries. These significant figures, from a background study for the Science Council of Canada, by C. Beaumont Lewis, show that Canadians spend more on transportation than on food, and that the private automobile accounts for nearly 50% of the nation's total annual transportation bill. Are Canadians getting value for this tremendous outlay of funds?? The answer must be a qualified NO!! Consider the following:

- * Approximately 66% of all people and goods are transported in Canada either by automobiles, buses or trucks. But these vehicles -- with the exception of long-distance trucks and buses -- spend most of their lifetimes crawling in stop-and-go traffic. Cars designed to travel at 70 mph for hour after hour spend a major part, if not the major part, of their mobile hours crawling along at less than 20 mph and eight hours a day marking time and money in parking lots or garages.
- * A car is a financial loser from the time one buys it. It spends more of its life stationary than moving.
- * Almost empty commuter parking lots at subway and bus termini shout the message that, despite the inefficiency of automobile transportation -- the transit systems have failed to attract motorists into trains and buses. In 1970, fewer people travelled on transit vehicles than in 1969, and the figure has steadily dropped since 1967, according to the Canadian Transit Association.
- * The railways, once pioneer conveyors of everything in Canada from candle wax to farm machinery for isolated homesteaders, continue to suffer the great inroads made by modern trucking. One of the major problems faced by the railways is rising costs in an era of stagnation. Some idea of this pause in railway expansion is shown by the fact that in the past 40 years only 7,000 miles of single track have been constructed, making a total of 46,000 miles. At present, railways move less than 40% of total freight handled in Canada, versus 60% in 1940. The largest chunk has been taken away by the trucking industry, which now accounts for nearly 40% of the total freight, versus only approximately 12% in 1940.

However, the railways now realize that the technological changes that have chewed into their profits can be turned to their own advantage. Computerized marshalling yards, unit freight trains, electronic signaling equipment and other innovations have increased efficiency and cut costs. Although slow to exploit ultra-fast passenger trains (as in Japan, Britain and Germany), Canadian railways are beginning to do something about it. The introduction of the Turbotrain between Montreal and Toronto (since taken off owing to technical troubles) is a turning point in passenger rail traffic in Canada. This effort is now being followed up by the 120 mph LRC train, due to go into service in 1973. Developed by a consortium of Alcan Canada Products, Dominion Foundries & Steel Ltd., and MLW Industries, the train is designed to operate on existing North American tracks. If successful, it could thus have an export potential. This is the type of venture needed if passenger rail traffic is to regain some of the traffic lost to the airlines, particularly on downtown-to-downtown hauls between, say, Montreal and Toronto, Calgary and Edmonton, and Toronto and Windsor.

Total freight traffic carried by railways in Canada for the first half of 1970 totaled 110.5-million tons. This compares with 206.9-million tons for the whole of 1969. Total freight carried in the second quarter of 1970 was 17.5% more than for the second quarter 1969, most of the increases coming from the loading of crude materials, food, feed, beverages and tobacco. Special types of rail traffic, such as piggyback and freight forwarder, also showed increases in fabricated materials carried.

The major transportation problem in Canada is not long-distance transportation but urban transportation. This is brought about by rapidly increasing urbanization, a streaming into the cities of the descendants -- plus immigrants from abroad -- of the settlers whose biggest problem was originally long-distance transportation.

Canada is urbanizing faster than any other country in the world. By 1980, approximately 80% of Canadians will be urban residents, according to the Economic Council of Canada. Most of these -- about 15-million -- will be living in only 18 major urban centres. Unless a pragmatic attack on the problem of urban transportation is made by politicians -- who have so far shown lack of leadership -- Canadian cities by 1980 will be even more polluted by fumes and noise than they are now and the streets will be choked by cars, trucks, buses and motor scooters.

Great infusions of more public and private money alone cannot guarantee a realistic solution to Canada's urban transportation problem. What is needed is leadership in adopting the more advanced developments in urban planning and land use. Public transit and private and commercial transportation must be planned as an integral part of land use. Canada may be a huge country but its urban centres are crowded. Unfortunately, money in these hard times is not available and the only hope is that existing transportation facilities can be improved and at least some of the newer means of transport vehicles tried out. What is seriously lacking is coordination -- coordination of city planning departments with transportation departments.

If money and coordinated planning and operation become a reality, here's what could be done to speed transportation in Canada's cities:

- * Door-to-door dial-a-bus service. This is already in limited use in some of the outlying boroughs of Toronto and Regina. At present the system depends on requests for service made over the telephone to a radio dispatcher. It eventually needs to be coordinated and dispatched by computer, a completely automated system that would give a standard of comfort and faster service than private automobiles.
- * High-speed commuter trains. Development of new control techniques for existing rail-transit systems so that they can be integrated with other forms of transport and extend their market penetration. Eventually new methods of propelling and guiding new types of urban trains, such as Hovertrains and monorails. [The Ontario government is studying the possible use of Hovertrains.]
- * Super-fast intercity trains. The introduction of reliable, fast trains between cities is one answer to the lengthening journey time by air between such major routes as Montreal and Toronto, Calgary and Edmonton, and Vancouver and Calgary. As airports move farther from the city centres -- as they are doing in Montreal and Toronto -- total journey times increase. This trend to putting airports farther out is worldwide. The new London, England, airport is to be built at Foulness, about 65 miles from the city centre, versus the present distance of about 30 miles to Heathrow; the new Tokyo International Airport, to replace the present one at Haneda (already connected to downtown by a fast monorail) will be twice as far from downtown Tokyo.

As this trend continues there will be a growing need for short-take-off-and-landing (STOL) commuter aircraft that can use small airports closer to downtown, plus an increased demand for really fast -- 100 mph plus -- trains between downtown and downtown.

-- FINANCIAL POST.

ART BUCHWALD'S SOLUTION TO THE PASSENGER PROBLEM

Columnist Art Buchwald's solution to the passenger problem---containerize the passengers!!!

"There is no doubt that the railroads are losing money on passenger business. If they had their druthers, they would just stay with freight. At the same time, the public's need for passenger trains, particularly commuter trains, is greater.

What is the solution? Professor Heinrich Applebaum, who holds the Casey Jones chair of railroad philosophy at Pullman University, has come up with a radical idea that could save both the railroads and the needed passenger service.

Prof. Applebaum says the solution to the problem can be found in larger aluminum containers which are now being used for freight.

These containers are placed on trains already packed, and unloaded the same way. This saves companies money in freight handling, loss due to pilferage and breakage, and also saves time.

Applebaum claims there is no reason you can't use the same containers for people.

This is how it would operate: Let us assume 150 people are going to take the 7:30 a.m. from Greenwich, Connecticut. When they arrived at the platform, they would be placed horizontally in the containers. (This would give everyone an extra hour's sleep to New York.) The container would be insulated as well as air-conditioned.

When everyone was squeezed in the container it would be sealed. Then a freight train going through Greenwich would stop and the container would be hoisted on board a flatcar.

GERMANS ARE WORKING ON FAST SUPER TRAINS

Fantastic dreams are taking shape in Munich, Germany...

...of trains without wheels hurtling silently over the landscape at 300 mph...

...of urban transportation systems where a computer guides you automatically to your destination in a small car...

...of floating carpets which take you silently through air-conditioned tunnels from your foyer to the department store.

These are the dreams of very practical young scientists and engineers working in think tanks and factories around Munich. They have crossed the threshold into a world of tomorrow. And they've done it by applying modern management and systems to old, established principles. The super train is the furthest along. But there are other projects on the board in Munich which would stretch even Buck Rogers' imagination. They will all be needed to face up to the transportation crisis of the future. Statistics give the grim picture: between now and 1975, the number of vehicles on German roads will increase 285%.

The space on which to run these vehicles is scheduled to increase only 30%. Engineers say the German situation is typical of all industrialized nations. The super train is a part of the answer to this crisis. It will travel at 300 mph. It runs virtually without noise, and with no pollution whatsoever. And it has no wheels. One firm, Boelkow, already has built a five-ton pilot model, the first vehicle of its kind in the world. A second firm, Krauss-Maffei, has brought out a 10-ton model of its own. Both are based on old established principles.

---the "magnetic cushion" which lifts the train 10-15 millimeters off the track.

---the linear induction motor, an electric motor without conventional moving parts and which is capable of producing speeds up to 650 mph.

Neither is new: The principles of the motor were known in the 19th Century, and in 1937 a German engineer named Herman Kemper took out a patent on the magnetic cushion. What is new is the techniques of melding the two principles into one transportation system. These are truly of the space age, and Boelkow for one give full credit to its experience in designing controls for earth satellites. Both Boelkow and Krauss-Maffei claim they have solved the key problem of control and guidance. They are now waiting for the West German government to put up about \$100-million for a 40 mile test track so they can prove it in practice. If all goes well--and the engineers there can see no reason why it should not

The same thing would happen all along the way. Commuters in containers at Portchester, Rye and Larchmont would also be waiting to be picked up by freight train.

When the train arrived at Grand Central Station, the containers would be taken off by cranes and opened on the platform, and everyone would go to work.

The reverse would happen in the evening, Applebaum said, except in this case, to break the monotony, the commuters would be loaded in vertically.

The beauty of the plan, says Applebaum, is that by using containers, railroads could cut the cost of a ticket from Greenwich to New York by \$3.50.

They could also profit by the fact that they would not have to build new passenger trains, and they could eliminate the bar cars.

Psychologically, they wouldn't have to worry about customer relations, as the commuter service would be run by the freight department.

The big advantage of this is that once the railroads were able to legitimately treat passengers as freight, they would improve their service rather than try to discourage people from using the railroads.

Applebaum says that, at the moment, the container idea would only be practical on short runs, but he felt that as time went on a method could be developed for long runs to freeze people in refrigerator cars and then thaw them out when they reach their destinations.

The Department of Transportation, which is trying to find a solution to the passenger train problem, has expressed great interest in the Applebaum plan. A spokesman for the department said:

'If nothing else, it could save the Penn Central Railroad.'

--Europeans could be travelling by super train in the next decade. The gap between today's slow trains and the airplane will have been filled.

Other people are working on super trains too. Both the British and the French are developing vehicles based on the air-cushion, or Hovercraft principle. Krauss-Maffei hasn't ruled this out, but the engineers there lean toward the magnetic cushion already adopted by Boelkow. The Hovercraft is noisy, a pollutant, and requires considerably more energy for lift--at least three times as much, according to Boelkow--than does the magnetic cushion system.

The United States is becoming increasingly more active in this field too, and has set up experimental facilities at Pueblo, Colorado. But the Germans say the Americans, too, are behind the times by working with the Hovercraft principle they consider out of date. The Japanese are also interested in filling the transportation gap, and in fact it is the proven success of the high-speed Tokyo-Hokkaido train to which engineers point as the sign of the future. The magnetic cushion principle is extremely simple. The vehicle (Krauss-Maffei is thinking in terms of 70-ton trains) literally hangs on a magnetic field set up by powerful built-in magnets. There is no friction whatsoever. "You can push our five-ton vehicle with your finger," boasts Boelkow's project engineer Goetz Heidelberg.

The linear induction motor sets up a rapidly alternating magnetic field by switching the flow electric current. This shoves the vehicle forward or backward by its effect on an aluminum rail. The two principles involved in the super train have been applied by Krauss-Maffei to the problem of transport in crowded urban centres. The company, which also builds conventional locomotives and the German Leopard tank, has designed a floating carpet supported by a magnetic cushion. This carpet, equipped with seats, would "float" through air-conditioned tubes over the streets and through buildings at 10 mph, also powered by linear induction motors. Engineers say the system will be perfected by 1974. Its cost estimated at \$3-million per kilometer, or a fraction of the cost of building a modern subway system, and Krauss-Maffei says 42 cities, from Tokyo to Tehran, are interested.

At Boelkow, another urban transport system is designed to cover greater distances than Krauss-Maffei's floating carpet, but will take less of a load. The computer-run system could eliminate the private automobile from downtown traffic by offering cheap, individual and nonstop transportation above the streets. It works this way: The customer puts his money in a computer and punches a button. This prints his route on a plastic card which he inserts in the vehicle, a three-man wheeled device which travels at some 20 mph, guided by computers, to its destination.

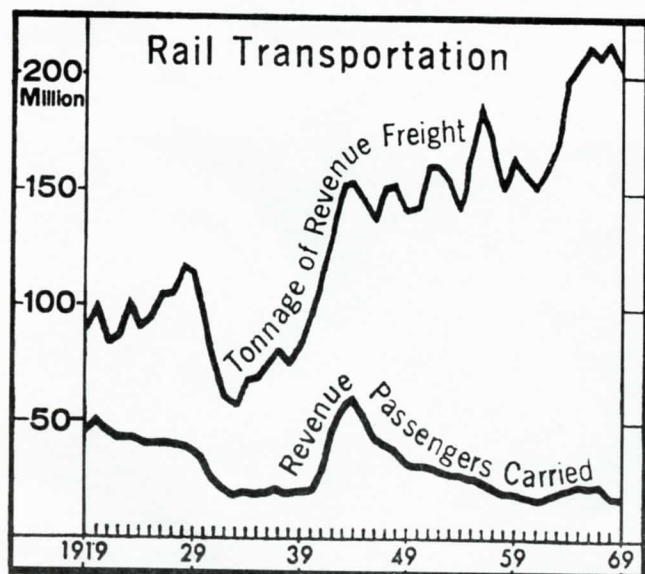
THE DECLINE OF THE CANADIAN PASSENGER TRAIN

The passenger train, once the only sure link between isolated Canadians, is in danger of becoming as extinct as the carrier pigeon.

A recent application by Canadian National Railways to the Canadian Transport Commission illustrates the current state of the rail passenger business. The CNR has asked for discontinuance of some of the major intercity passenger routes in Canada, all in the Quebec City-Montreal-Toronto-Windsor corridor. The railways must apply for abandonment to qualify for subsidies. The application follows strenuous attempts by the CNR to promote the Montreal-Toronto run. The railway had hoped to make the route profitable. But the losses claimed by the railway for the eight corridor routes totalled \$13.4-million in 1970.

The Montreal-Toronto run alone lost \$5.2-million in 1970. The other seven money-losing routes are: Toronto-Sarnia, Toronto-Stratford, Toronto-Windsor, Toronto-Brockville, Toronto-Niagara Falls, Montreal-Ottawa, and Montreal-Quebec City. The CNR says the fast Rapido service on the Toronto-Montreal run is making money but it must be included in the application as the transport commission wants figures for all services on a particular route.

With this application, the CNR and CP Rail now have filed for abandonment of all intercity passenger services in the country. The National Transportation Act requires railways to file for abandonment in order to be eligible for federal subsidies of up to 80% of annual losses.



In 1920 the railways carried 51.3 million passengers compared with 18.9 million in 1969. During the same period freight hauled by the railways soared to a high of 216.4 million tons in 1968, more than double the amount carried in 1920.

If the Canadian Transport Commission judges the routes are losing money and should be maintained in the public interest it can recommend subsidies. The commission may, of course, agree the lines should be discontinued.

Until the late 1940s, the passenger train was a going concern. In 1920, the railways carried 51.3-million passengers for a total of 3.5-billion miles, a pre-Second World War peak. There was a decline during the hungry 1930s but war brought a passenger boom. More passengers--60.3-million--were carried in 1944 than at any other time in Canadian railway history. There were carried for a record 6.9-billion passenger miles. But with the end of the war, a long decline began. By 1961, the railways were carrying only 18-million passengers for two billion passenger miles.

This was going on at a time when the Canadian population was steadily rising. The population was 8.5-million in 1920, 11.9-million in 1944, 18.2-million in 1961 and 20.4-million in 1967. Freight hauled by the railways also climbed. Trains carried 100.1-million tons in 1920, 155.3-million tons in the wartime year of 1944, and 153.1-million tons in 1961, a poor year for the Canadian economy. By 1967, freight figures had zoomed to 210.5-million tons.



(RIGHT) The train departure board at Windsor Station in Montreal tells a sad story of the decline of the passenger train in this country. Of 25 trains listed, only 7 are long distance operations. The rest are commuter trains. Since this picture was taken (January 3, 1971) there have still more deletions from this listing.
(John Thompson)



Trains such as this Canadian Pacific day train are now nothing but memories and live on only on photographic film. Trains such as this were particularly susceptible to the inroads of bus and auto competition which syphoned off all of the passengers and other business. This particular train, headed by Pacific 1222, is pictured at Bala, Ontario in the late 1940s.

(Robert McMann Collection)

Canadian National launched a vigorous promotional campaign in 1962 to increase passenger traffic. It came out with the red, white and blue fare plan which offered cheaper tickets on days when the trains were normally lightly used. Passenger numbers rose, reaching a peak in 1967--Centennial Year--when heavy tourist travel boosted totals to 24.6-million, travelling 3.1-billion miles. But interest in the railways dropped off again and by 1969 the railways had fallen back almost to their 1961 level.

Along with the decline in passengers, service rapidly outpaced revenue. The CNR has issued a comparison of revenue and expenses for the period 1961 to 1961 with 1961 figures equalling 100. Revenue fell to about 80 in 1965 while costs climbed to about 115. Revenue started rising again to about 93 in 1969 while costs rose sharply to 150. Why has this happened? Why shouldn't passenger train travel be as popular and profitable as it was in the boom years early in the century?

One of the main reasons is that passenger trains now have to compete for passengers with fast, efficient and comfortable airplanes and with buses using good highways. But the most formidable rival is the automobile. A Canadian Transport Commission survey of competing methods of transportation between Edmonton and Calgary shows that the automobile claimed almost 92% of the passenger traffic in 1969 with the railways getting less than 1%. The rest was split evenly between airplanes and buses.

The problems the railways face are partly brought on by themselves. While their rivals were improving, passenger train equipment was standing still. CP Rail introduced the flashy transcontinental, The Canadian, in the mid-1950s at a cost of \$50-million but quickly lost heart when it did not prove profitable. The CNR also came out with modern transcontinental trains, and has recently tried the new Turbo on the Montreal-Toronto route. But throughout most of this post-Second World War period, the railways were being outdone by other forms of transport, particularly the airlines.

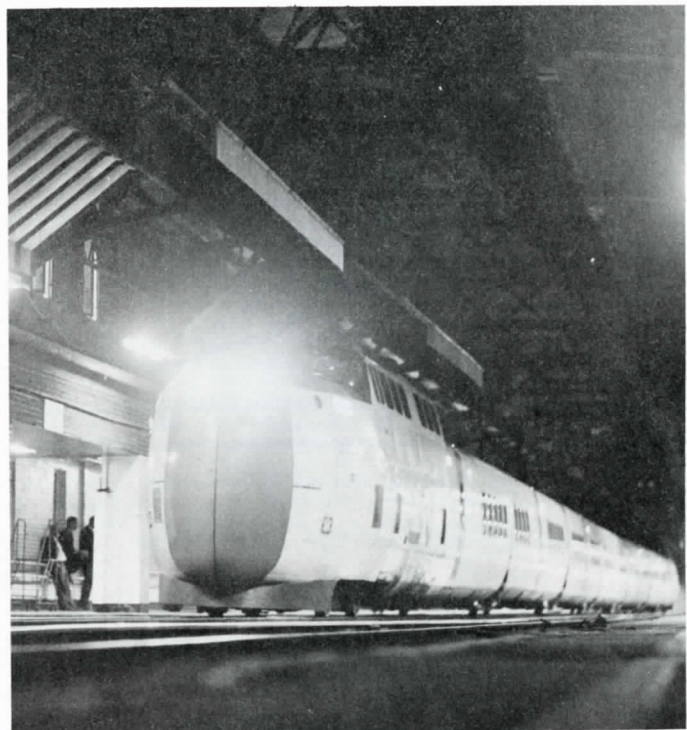
Railways are fighting to stay in the passenger business where there still exists the possibility of holding the traffic and gaining new business. One such area is in the Corridor passenger service field. In Eastern Canada Canadian National's passenger business between Toronto and Montreal is still quite intense. CN has also made use of new forms of technology in the form of the Turbotrain to improve the quality of service in the Toronto-Montreal Corridor. Although the Turbos are currently not in service because of technical problems, a decision is expected shortly on whether they will see service again.

New forms of technology such as the Turbotrain will help railways regain lost passenger business.

(J. Bryce Lee)

The complaint has been legitimately made that the railways seemed more interested in freight traffic than passenger trains. It is easy to see why. CN estimates that passenger train services bring in about 7% of the company revenues while freight accounts for about 74%. Yet more employees are needed to operate a passenger train than a freight. Any company whose shareholders want to see profits would concentrate on the money-making business. Critics of the railways say passenger trains have to wait on sidings while freights pass through. The railways say this is not their policy but even if it happens only occasionally the delay is enough to divert more customers away from the passenger trains. However, the passenger trains are not being allowed to die. Every reduction in passenger service brings a storm of criticism in Parliament. Concerned railwaymen, assisted by government, are beginning to grapple with the problem. The climate of public opinion is increasingly in their favour as there is growing dissatisfaction with air pollution and increasing congestion on the highways.

-- MONTREAL GAZETTE.



Self-propelled rail diesel cars saw extensive use by both Canadian transcontinental railways in branch line services. Such cars still see intensive service.

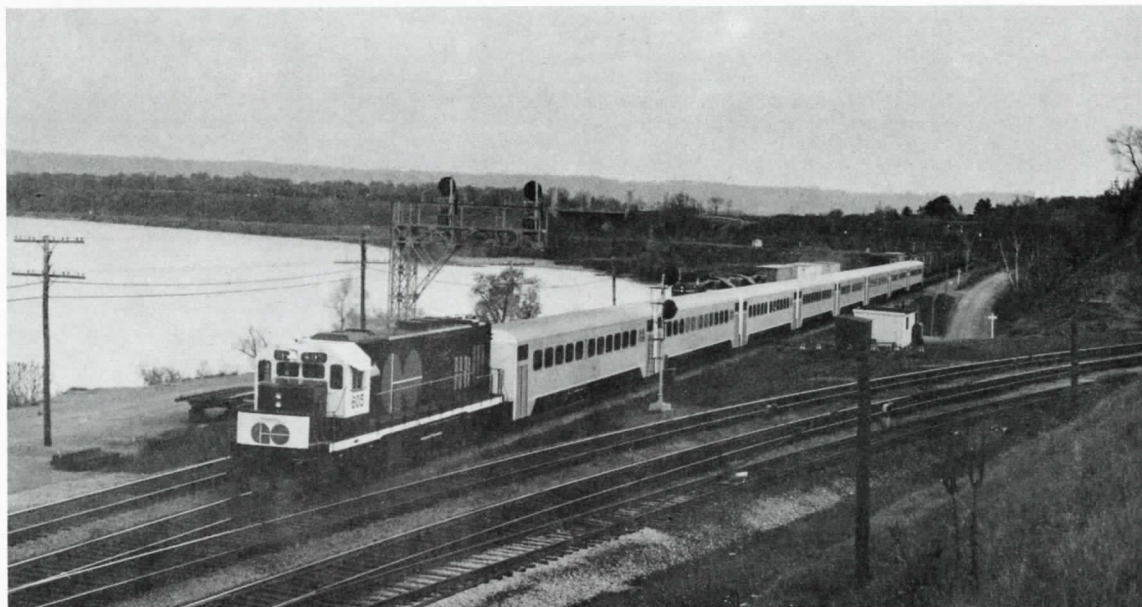
The two CP Rail RDC's are pictured at John Street roundhouse in downtown Toronto. (John Thompson)



Canadian National is in the midst of a program of overhauling and upgrading much of its passenger stock. Trains such as the Super Continental will see this refurbished stock. Here CN FP1 6781 leads the Toronto section of the Super Continental into Barrie station on December 2, 1971. (Robert Lampkin)



The Government of Ontario GO Transit service (operated for the province by Canadian National) has done much to alleviate the urban transport problem in the Toronto-centred region. Here a GO train zips through Bayview Junction on its evening run into Hamilton, Ontario. (Bill Common)



Four SW1200 road switchers of Canadian National hurry a freight train along on the York Subdivision near Bathurst Street, July 1, 1971. (John Thompson)



A NEW TWIST IN CONTAINERIZATION

For years it was said that containerization would kill the St. Lawrence Seaway, and that such ports as Toronto would be relegated to handling bulk materials only.

Ignoring the pessimists, officials at the Port of Toronto have in the last few years been pushing ahead with plans to combine the benefits of containers with those of Great Lakes' shipping. In the last two years they have been meeting with small but encouraging successes. Now, they say, a turning point has been reached, and Toronto has become a major container port. The event was marked in September by the arrival of the port's first pure containership, the Europe Canada Line's Rando, a 150-container vessel formerly in service with CP Ships as the Beaverando. Containers destined for other Great Lakes' ports are off-loaded in Toronto and put on ECL Line ships going further up the Seaway. In addition to the ECL Line service, containers arrive at Toronto regularly on board semi-containerships belonging to 19 of the more than 40 lines serving the port.

The key to the port's success with containers, Captain Walter Culbertson, the Port of Toronto's director of terminal operations says, is that it is at the heart of a great market area. "You see, there are two basic philosophies at work," he says. "One is to move containers across the Atlantic as quickly as possible, using rail and truck transportation as the fastest means of transport. The other, the one held by the Germans, the Russians, is to come directly into the heart of the market, to do as much of the job as is possible."

The Port of Toronto's newest piece of equipment--a \$600,000 mobile container crane--recently arrived at Marine Terminal 35. At a maximum radius of 82 ft., the crane's capacity will be 26.4-short tons which will allow for the handling of all sizes of containers from the far side of the vessel. The crane is mounted on a mobile truck carrier and includes a unique tower and boom combination which will allow for maximum flexibility in crowded working areas. This is the first container crane of its kind in the world and was developed to meet the port's design criteria. As a result, the increased speed and efficiency in handling loaded containers will further minimize turn-around times of vessels calling at Toronto.

Container traffic being handled at Windsor, Ontario, can only be described as phenomenal, and there is no sign of a slackening in the pace at which it has developed over the last three years, say Canadian National officials. In fact, the city is well on the way to becoming one of the most important centres in Ontario for the handling of world-wide containers. Richard Veemis, manager of CN's Southwestern Ontario area, says the first import-export containers arrived in Windsor from Halifax in 1969. "That year we handled 136," he says. "The following year the number exceeded 2000. In 1971 we expect the volume will be 100% greater than last year."

Mr. Veemis attributes Windsor's emergence to a number of factors, chief among them being its proximity to Detroit and the U.S. Midwest at the end of rail lines connecting it with Canada's ocean ports. Most of the import-export containers arriving at Windsor are going to or from the United States.

Among other factors contributing to the growth of the import-export trade at Windsor, Mr. Veemis lists the city's accessibility to the U.S. highway system, to international barge shipments on the Detroit River, and the fact that bonded container shipments can move directly from ocean ports and undergo customs clearance at or near the end of their journey, rather than wait for clearance at the ports. "Also," he adds, "there is the fact the rail connections to Windsor ensure containers can be moved quickly to and from ocean ports all year round." CN in March opened a container handling yard near its express shed and equipped it with a mobile crane to lift containers to and from rail cars and trucks. It was designed to handle as many as 50 containers a day.

Although containerization has progressed a great deal in the last few years, it's still at the beginning, says Peter Hunter, container projects consultant at Interpool International Ltd., container manufacturers and lease operators, in Toronto. "A great deal has happened," he says, "but we're really just starting, particularly in the domestic uses of containers. You would be amazed at the uses being found within Europe for containers, which is really domestic usage."

Canadian National is expected to move times as much container traffic this year as in 1969, the first full year of involvement with container systems.

Approximately 40% of the import containers being handled by Canadian Pacific on their Canada-UK/-Europe service are delivered to Ontario--chiefly Toronto, Ottawa, Hamilton and Windsor, with about an equal amount of export container traffic originating in the same areas, says CP Ships.

Containers from the UK can be shipped to British Columbia faster and cheaper via the Canadian "land bridge" than by the more usual sea route through Panama, say a UK firm of freight forwarders. The firm, W. Wingate & Johnston of London, recently shipped to 20-ft. containers to Vancouver by way of CP Ships' containerships service into Quebec City, and CP Rail's transcontinental service. Containers are now being shipped to the west coast by the UK firm on a regular basis with each sailing of CP Ships' four containerships.

-- CANADIAN TRANSPORTATION & DISTRIBUTION MANAGEMENT.